PCM-R700

SERVICE MANUAL

Ver 1.1 2002.01

US Model
Canadian Model
AEP Model
UK Model

Model Name Using Similar Mechanism	PCM-2800
Tape Transport Mechanism Type	DATM-58

SPECIFICATIONS

Recording section

Tape	Digital audio tape
Recording head	Rotary head
Recording time	Standard: 120 minutes Long-play: 240 minutes (DT-120)
Tape speed	Standard: 8.15 mm/s Long-play: 4.075 mm/s
Drum rotation	Standard: 2,000 rpm Long-play: 1,000 rpm
Error correction	Double-encoded Reed Solomon code

Tape section

Track pitch	13.6 µm (20.4 µm)
Sampling frequency	48 kHz, 44.1 kHz, 32kHz
Modulation system	8-10 modulation
Transfer rate	2.46 Mbit/sec
Number of channels	2 channels, stereo
D/A conversion (quantization)	Standard: 16-bit linear Long-play: 12-bit non-linear

General section

Power requirements

Where purchased	Power requirements
U.S.A./Canada	120 V AC, 60 Hz
Europe/U.K.	230 V AC, 50/60 Hz

Power consumption	34 W
Dimensions	Approx 482 × 145 × 355 mm (w/h/d) (19 × 5 3/4 × 14 inches) (not including rack mount adaptor)
Weight	Approx 7.3 kg (16 lb 2 oz)

Remote commander RM-D757 (supplied)

Remote control system	Infrared control
Power requirements	3 V DC, with two size-AA (R6) batteries
Dimensions	Approx 45 × 210 × 26 mm (w/h/d) (1 13/16 × 8 3/8 × 1 1/16 inches)
Weight	Approx 100 g (3.5 oz) incl. batteries

Input connectors

Analog Input

Connector	Type	Input impedance	Rated input level [a]
ANALOG (UNBALANCE)	Phono-plug jack	47 kilohms	–12 dBs
ANALOG (BALANCE)	XLR-3 (FEMALE)	10 kilohms or more (balanced)	+4 dBs (factory setting)

Digital Input

Connector	Type	Input impedance	Rated input level
AES/EBU	XLR-3 (FEMALE)	110 ohms (balanced)	–
COAXIAL	Phono-plug jack	75 ohms	0.5 Vp-p

– Continued on next page –

DIGITAL AUDIO TAPE DECK

SONY®

9-960-914-12 **Sony Corporation**
2002A0500-1 **Home Audio Company**
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Published by Sony Engineering Corporation

Output connectors
Analog Output

Connector	Type	Output impedance	Rated output level [a]	Load impedance
ANALOG (UNBALANCE)	Phono-plug jack	1 kilohm	–12 dBs	47 kilohms
ANALOG (BALANCE)	XLR-3 (MALE)	100 ohms (balanced)	+4 dBs (factory setting)	10 kilohms or more
PHONES	Stereo phone-plug jack	100 ohms	0.36 mW	32 ohms

Digital Output

Connector	Type	Output impedance	Rated output level	Load impedance
AES/EBU	XLR-3 (MALE)	35 ohms (balanced)	–	110 ohms
COAXIAL	Phono-plug jack	75 ohms	0.5V p-p	75 ohms

Variable range of analog (BALANCE) input/output reference level [a]
+4 dBs to –12 dBs
Maximum analog (BALANCE) output level
+24 dBs
Remote switch connectors
DIN connector (8-pin, parallel)
Monaural minijack (serial)

Audio characteristics
Frequency response [b] Standard: 20-20,000 Hz (±0.5 dB)
Long-play: 20-14,500 Hz (±0.5 dB)
Signal-to-noise ratio [b] 90 dB or more
(20 kHz LPF, A-weight filter ON)
Totalharmonic distortion [b] Standard: 0.05% or less
Long-play: 0.3% or less
(1 kHz, Reference level [a] 20 kHz LPF ON)
Wow and flutter Below measurable limit (± 0.001 % W. PEAK)

a) The reference lebel corresponds to –20 dB on the peak level meters.
b) During analog input sith the SBM function off

Supplied accessories
AC power cord (1)
Remote commander (remote) RM-D757 (1)
Size-AA (R6) batteries (2)
Screws (M5 × 12) (4)
Decorative washers (4)
Operating instructions (1)
Warranty card (U.S.A. and Canadian models only) (1)

Design and specifications are subject to change without notice.

SERVICING NOTES

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚ C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering .

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Discard used batteries according to the manufacturer's instructions.

ADVARSEL!
Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

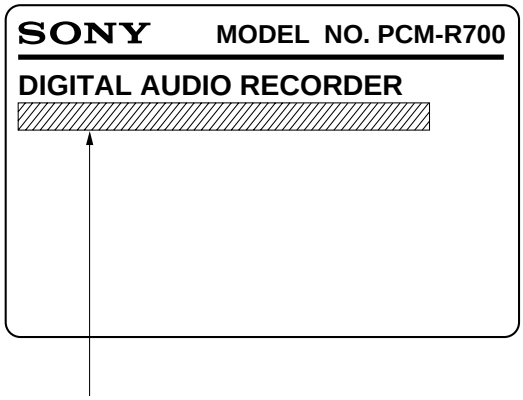
ADVARSEL
Eksplosjonsfare ved feilaktig skifte av batteri.
Benytt samme batteritype eller en tilsvarende type
anbefalt av apparatfabrikanten.
Brukte batterier kasseres i henhold til fabrikantens
instruksjoner.

VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

MODEL IDENTIFICATION

– Model Number label (Printed in Back Panel) –



US, Canadian model : AC 120 V 60 Hz 34 W
AEP, UK Model : AC 230 V ∼ 50/60Hz 34 W

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

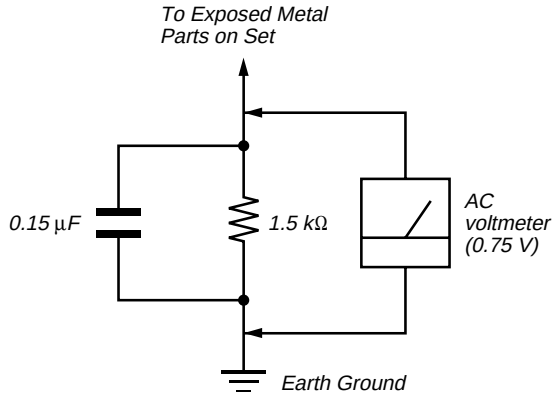


Fig. A. Using an AC voltmeter to check AC leakage.

TABLE OF CONTENTS

1. GENERAL 4

2. DISASSEMBLY 18

3. ADJUSTMENTS 22

4. DIAGRAMS

4-1. Block Diagrams
– Digital Audio Section – 29
– Analog Audio Section – 31
– System Control Section – 33
– Power Section – 35
4-2. Printed Wiring Board – RF Section – 40
4-3. Schematic Diagram – RF Section – 43
4-4. Printed Wiring Boards – MD Section – 46
4-5. Schematic Diagram – MD Section – 49
4-6. Printed Wiring Boards – DIGITAL Section – 53
4-7. Schematic Diagram – DIGITAL Section – 57
4-8. Schematic Diagram – AUDIO Section – 61
4-9. Printed Wiring Boards – AUDIO Section – 65
4-10. Printed Wiring Boards – DISPLAY Section – 69
4-11. Schematic Diagram – DISPLAY Section – 73
4-12. IC Pin Function Description 76

5. EXPLODED VIEWS 88

6. ELECTRICAL PARTS LIST 96

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

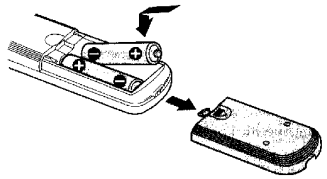
Unpacking

Check that you have received the following supplied items:

- AC power cord (1)
- Remote commander (remote) RM-D757 (1)
- Size-AA (R6) batteries (2)
- Screws (M5×12) (4)
- Decorative washers (4)
- Operating instructions (1)
- Warranty card (U.S.A. and Canadian models only) (1)

Inserting batteries into the remote

Insert two size-AA(R6) batteries, matching the + and – on the batteries with the markings inside the battery compartment.



Before using the remote

Set REMOTE on the front panel to WIRELESS.

When to replace the batteries

With normal use, batteries should last for about 6 months. When the remote no longer operates the deck, replace both batteries.

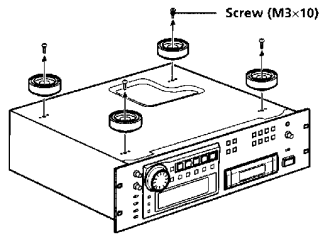
Notes

- Do not leave the remote near an extremely hot or humid place.
- Do not drop any foreign matter into the remote casing, particularly when replacing the batteries.
- Do not expose the remote sensor to direct sunlight or illumination as doing so may cause malfunction.
- When not using the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

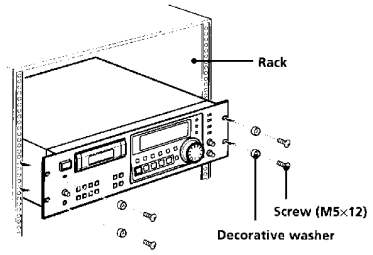
Rack Mounting

You can install your deck in a 19-inch 3U-size rack. Be sure to disconnect the deck from the wall outlet before you install it.

1 Remove the four feet from the deck.



2 Insert the deck into the rack and secure it with the supplied decorative washers and screws (M5×12).

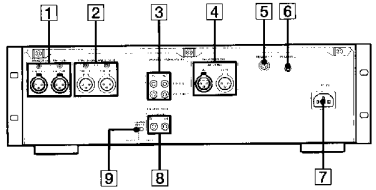


Note

Do not reattach the screws directly after removing the four feet. Put the screws and the feet in a safe place for reattachment in the future. Using longer or shorter screws may damage the internal circuit board.

Hooking Up the System

This section describes how to hook up your deck to an amplifier, stereo mixer, or other digital audio components. Be sure to turn off the power to each component before making the connections.



1 ANALOG(BALANCE) IN connectors/ ANALOG(BALANCE) IN LEVEL controls

2 ANALOG(BALANCE) OUT connectors/ ANALOG(BALANCE) OUT LEVEL controls

3 ANALOG(UNBALANCE) IN/OUT connectors

4 DIGITAL AES/EBU IN/OUT connectors

5 REMOTE 1 connector (For parallel remote)

6 REMOTE 2 connector (For serial remote)

7 AC IN socket

8 DIGITAL COAXIAL IN/OUT connectors

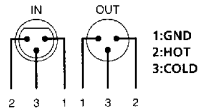
9 DIGITAL IN/OUT switch

Analog connections

For connections through the ANALOG(BALANCE) IN/OUT connectors

Use XLR balanced cables.

ANALOG(BALANCE) IN/OUT pin polarity



The analog input/output reference level adjustment

The analog input/output reference level during recording or playback is factory set to +4 dBs within a range of –20 dB to the full bit level for both input and output.

To lower the reference level, use a screwdriver to adjust the ANALOG(BALANCE) IN/OUT LEVEL controls on the rear panel for both CH-1 (L) and CH-2 (R). You can adjust the reference level in a range of +4 dBs to –12 dBs. Make sure to set the REC LEVEL CH-1(L)/2(R) controls on the front panel to the center point before making this adjustment.

For connections through the ANALOG(UNBALANCE) IN/OUT connectors

Use phono-plug audio connecting cords.

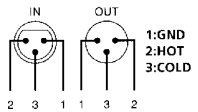
Digital connections

Use the DIGITAL IN/OUT switch on the rear panel to select the input/output connectors for digital signals. Set the switch to AES/EBU to select the DIGITAL AES/EBU IN/OUT connectors; set it to COAXIAL to select the DIGITAL COAXIAL IN/OUT connectors.

For connections through the DIGITAL AES/EBU IN/OUT connectors

Use XLR balanced cables for digital connections.

AES/EBU IN/OUT pin polarity



For connections through the DIGITAL COAXIAL IN/OUT connectors

Use coaxial digital connecting cords.

Other connections

To connect a switch box through the REMOTE 1 connector

Refer to "Remote Control Function Using a Parallel Remote Connector" on page 28.

To connect the optional remote through the REMOTE 2 connector

Refer to "The Optional Remote RM-D750" on page 26.

Connecting AC power cord

Connect the AC power cord (supplied) to the AC IN socket on the rear panel and connect the plug on the other end to a wall outlet.

Where do I go next?

Now you're ready to use your deck.
For basic operations, go to pages 9 to 11; for advanced operations, go to pages after 12.

Digital Interface

Digital input and output connectors

- The following table shows signal formats that correspond to the input and output connectors on the deck.
- The DIGITAL COAXIAL IN connector accepts not only the consumer version of the IEC-958 international digital audio interface standard, but also the broadcasting studio version of the IEC-958 standard used by such DAT decks as the PCM-2300, PCM-2700 or PCM-2700A.

Type	Input connector	Output connector
DIGITAL AES/EBU	AES/EBU format	AES/EBU format
DIGITAL COAXIAL	IEC-958 for consumer use	IEC-958 for consumer use
	IEC-958 for broadcasting studio use	

Copy information during recording

- Copy information that is recorded on tape during recording varies according to the input connector used and the signal format, as shown in the table below.
- In the case of AES/EBU and the IEC-958 for broadcasting studio use, the digital signal carries no copy information.
- As for the IEC-958 for consumer use, three types of copy information exists: copying possible, first-generation copy permitted, and copying prohibited (Serial Copy Management System).

Input connector	Signal format	Copy information carried by digital signal	Recording capability on this deck	Copy information recorded on tape
DIGITAL AES/EBU	AES/EBU	None	Possible	Determined by menu setting (pages 24 and 25)
DIGITAL COAXIAL	IEC-958 for broadcasting studio use	None	Possible	Determined by menu setting (pages 24 and 25)
	IEC-958 for consumer use	Permitted	Possible	Permitted (ID 6:00)
		First-generation only	Possible	Prohibited (ID 6:10)
		Prohibited	Possible	Prohibited (ID 6:10)
ANALOG (BALANCE/ UNBALANCE)	—	—	Possible	Determined by menu setting (page 24)

Writing start IDs automatically during recording

- When "AUTO" appears in the display during recording, the automatic writing of start IDs takes place according to the input connector used and the signal format, as shown in the table below.
- The condition for the automatic writing of start IDs differs according to the category code in the digital signal, such as an audio input level signal, a DAT start ID code, or a Q-code from a CD track (see pages 24 and 25).

○: automatic writing possible
×: automatic writing prohibited

Input signal	Signal format (Category code)		Automatic writing according to: audio input level a)	DAT start ID b)	Q-code from a CD track
DIGITAL AES/EBU	AES/EBU		○	○c)	×
	IEC-958 for broadcasting studio use		○	○d)	×
DIGITAL COAXIAL	IEC-958 for consumer use	(DAT)	○	○	×
		(CD)	○	×	○e)
		(Other)	○	×	×
ANALOG	—		○	×	×

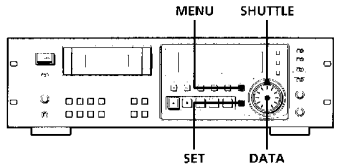
a) If the input level remains under the level set in the "L-SY TH" menu longer than the time set in the "L-SY BK" menu (see page 24), the deck writes a start ID when the input level rises above that level.
b) DAT skip IDs are automatically written in the same way.
c) Only when connected to the PCM-2600, PCM-2800, PCM-R500 or PCM-R700. When the connected decks consist of a PCM-R500 or PCM-R700, select "on" in the "AFS S-ID" menu of the playback deck.
d) Only when connected to the PCM-2300, PCM-2700, or PCM-2700A.
e) Some CD players do not output track information (Q-code) in the digital signal.

Digital signal lock range

- The lock range of a digital signal (signal reception range) is about ±0.1% for a sampling frequency of 48 kHz, 44.1 kHz, or 32 kHz. Variable pitch signals are not receivable.
- When the digital input sampling frequency information does not match the actual sampling frequency, it is possible to record that signal if you change the REC MODE switch on the front panel to the actual sampling frequency of the signal.

Setting the Clock

Your deck has a built-in clock to keep track of the current date and time. Once you set the date and time by the menu settings, this information will be recorded on the tape along with the audio signal during recording, allowing you to check the recording date time of the tape during playback at a later time.

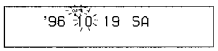


1 With the deck stopped, press MENU.
The menu appears in the display.

2 Turn SHUTTLE to display the "CLK-SET" menu.

3 Turn DATA to display "on" and press SET.
The year indication flashes.

4 Turn DATA to decrease or increase the displayed year, then press SET.
The year indication stops flashing and the month indication begins to flash.



5 Repeat step 4 until all items have been set.
After setting the seconds, press SET to start the clock.

The day of the week is set automatically and is displayed as follows:
Sunday: "SU", Monday: "MO", Tuesday: "TU", Wednesday: "WE", Thursday: "TH", Friday: "FR", Saturday: "SA".

To display the date or time
See "About the Display" on page 16.

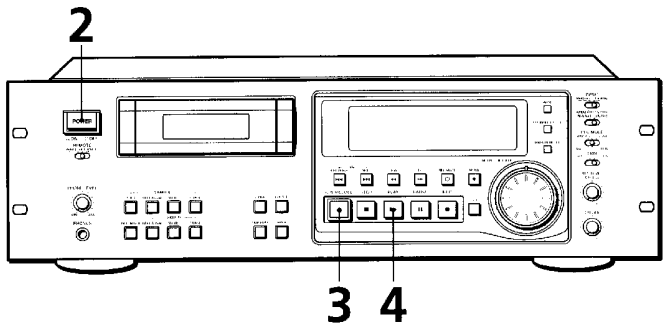
You can specify the format (12-hour or 24-hour) for the time display, and display order for the date display.
For details, see "ODER" or "DATEHOUR" on page 25.

For more accurate time recordings
Adjust the clock once a week.

Notes

- When you first set the clock after unpacking the deck, "'-- -- -- --" will appear when you press the SET button in step 3. This is normal. Set the clock according to the procedures above.
- Your deck uses a back-up battery to keep the clock running when the power is turned off. The life of the battery under normal use is approximately seven years. When the battery starts to run down, the clock will stop operating normally. When this occurs, have the battery replaced (for a fee) at your dealer or nearest Sony Service Center.

Playing a Tape

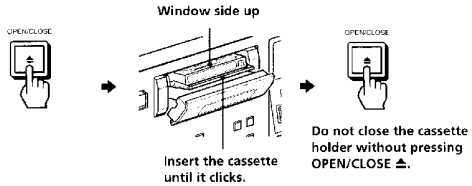


See pages 5 and 6 for hookup information.

1 Turn on the amplifier and set the source selector to the position for DAT.

2 Press POWER.
Make sure that the KEY PROTECT switch is set to OFF (PCM-R700 only) (see page 28).

3 Press OPEN/CLOSE ⏏ and insert a cassette.

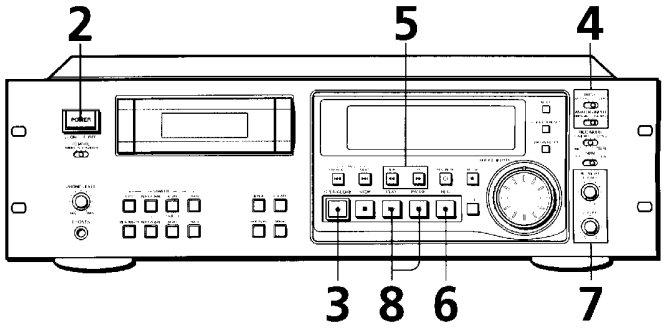

Window side up
OPEN/CLOSE
OPEN/CLOSE
Insert the cassette until it clicks.
Do not close the cassette holder without pressing OPEN/CLOSE ⏏.

4 Press PLAY ►.
The deck starts playing. Adjust the volume on the amplifier.

To use headphones
Connect them to the PHONES connector. Use PHONE LEVEL to adjust the volume.

To	Press
Stop playing	STOP ■
Pause playing	PAUSE ❚❚. Press the button again or press PLAY ► to resume play.
Go to the next track or the preceding track	NEXT ►►I or PREVIOUS I◄◄
Fast-forward or rewind	FF ►► or REW ◄◄ when the deck is stopped
Fast-forward or rewind while monitoring the sound	FF ►► or REW ◄◄ during playback. Release the button to resume normal playback.
Take out the cassette	OPEN/CLOSE ⏏ after stopping playing

Recording on a Tape

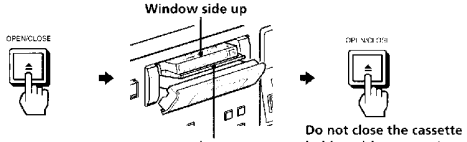


See pages 5 and 6 for hookup information.

1 Turn on the amplifier and play the program source you want to record.

2 Press POWER.
Make sure that the KEY PROTECT switch is set to OFF (PCM-R700 only) (see page 28).

3 Press OPEN/CLOSE ⏏ and insert a cassette.


Window side up
OPEN/CLOSE
Insert the cassette until it clicks.
Do not close the cassette holder without pressing OPEN/CLOSE ⏏.

4 Use INPUT, ANALOG INPUT, and DIGITAL IN/OUT to select the corresponding input connectors.

To record through	Positions of the switches		
	INPUT	ANALOG INPUT	DIGITAL IN/OUT*
ANALOG (BALANCE) IN	ANALOG	BALANCE	—
ANALOG (UNBALANCE) IN	ANALOG	UNBALANCE	—
DIGITAL AES/EBU IN	DIGITAL	—	AES/EBU
DIGITAL COAXIAL IN	DIGITAL	—	COAXIAL

* The DIGITAL IN/OUT switch is located on the rear panel (see page 5).

If "UNLOCK" appears in the display
The program source is not connected to the deck properly or is not turned on. Make sure that the program source is properly connected or turned on.

To adjust the recording level more accurately
While monitoring the sound, turn REC LEVEL CH-1 (L)/2 (R) so that the recording level on the peak level meters is at maximum level without entering the OVER range.

The segments of the peak level meters corresponding to the maximum signal strength remain lit longer than normal. The MARGIN indication shows the margin between maximum signal strength and 0dB, changing each time a stronger signal.

If the level exceeds 0dB
The segments under "OVER" light up, and "0.0dB" flashes in the display. If these segments light steadily, sound distortion may occur. To avoid this, keep the recording level between −12dB and 0dB.

To reset the margin indication
Press MARGIN RESET. The margin indication changes to "- - dB".

5 Locate the position where you want to start recording.

To record from the beginning of the tape
Press REW ◀◀ to rewind the tape to its beginning.

To record from the end of the recorded portion
1 Press REW ◀◀ to rewind the tape to its beginning.
2 Press FF ▶▶.
The deck locates the end of the recorded portion on the tape and stops automatically.

6 Press REC ●.
The deck changes to recording pause.
Recording does not start yet.

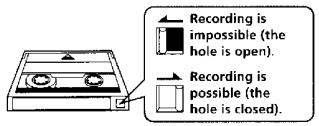
7 When recording an analog input signal, adjust the recording level with REC LEVEL CH-1(L)/2(R).
The recommended recording level is the center point.

8 Press PAUSE ❚❚ or PLAY ▶.
Recording starts.

9 Start playing the program source.
When the tape reaches the end, the deck rewinds it automatically to its beginning and stops (Auto Rewind).

To	Press
Stop recording	STOP ■
Pause recording	PAUSE ❚❚. Press the button again or press PLAY ▶ to resume recording.
Take out the cassette	OPEN/CLOSE ⏏ after stopping recording

To prevent accidental erasure
Slide the record-protect tab to the left as shown in the illustration below.

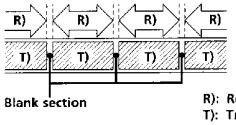


Things You Should Know Before Recording

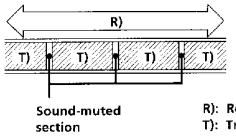
The difference between a blank section and a sound-muted section

The deck distinguishes between two kinds of silent sections, which are respectively called a "blank section" or "sound-muted section".

Blank section
This is a section on which no signal has ever been recorded.



Sound-muted section
This is a section on which a signal has been recorded but at a level that is not audible.



Important

Make sure no blank sections are created while you are recording. The existence of blank sections within recorded material will make search operations using the PREVIOUS I◄◄ /NEXT ►►I buttons impossible or destroy the continuity of the absolute time codes.

Absolute time codes

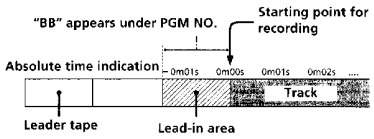
The absolute time indicates the elapsed time from the beginning of the tape. Once recorded, the absolute time codes cannot be re-written.

For accurate recording of absolute time codes

- If the tape is blank, make sure to start recording from the beginning of the tape.
- Use the Record Muting function (see page 14) to insert spaces between tracks. Do not advance the tape with the PLAY ► or FF ►► button.
- To start recording from the middle of a tape, use the End Search function (see page 14) to locate the end of the recorded portion. This will prevent the creation of blank sections.

Lead-in area

When the deck is loaded with a new cassette tape and it detects the leader tape, the deck can create a lead-in area depending on the menu setting as shown in the figure below. "BB" appears in the display for about 1 second at this time. The lead-in area can be inadvertently erased on another DAT deck if you press the REC ● button to start recording from the beginning of the tape without closing the cassette holder first. To prevent this, press the OPEN/CLOSE ▲ button to close the cassette holder before you start recording.
For details on selecting the automatic creation of the lead-in area and the frequency of the signals to be recorded, see "BB-WRT" and "BB-FS"on page 25.



If "EMPHASIS" appears in the display

The deck is recording a digital signal with emphasis (in the higher frequencies). The recording will also contain the same emphasis.

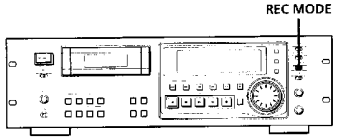
If the deck is left in recording pause for more than 10 minutes

Recording pause will be released automatically and the deck will stop for the sake of tape protection.
"SOURCE" will appear in the display of the PCM-R500.
To resume recording, press the REC ● button. The deck will change to recording pause.

Setting the Recording Mode

You can select between two recording modes, standard or long, in the following cases.

- When recording an analog input signal with the INPUT switch set to ANALOG
- When recording a digital input signal with a sampling frequency of 32 kHz with the INPUT switch set to DIGITAL



Set REC MODE to select the recording mode.

The following table shows the selectable recording modes and corresponding REC MODE position and sampling frequency for various input signals.

Input signal	REC MODE position	Recording mode
Analog	STANDARD (48k)	Standard play (48kHz)
	STANDARD (44.1k)	Standard play (44.1kHz)
	LONG	Long play (32kHz)
Digital (32kHz)	STANDARD (48k)	Standard play (32kHz)
	STANDARD (44.1k)	Standard play (32kHz)
	LONG	Long play (32kHz)
Digital (44.1kHz)	STANDARD (48k)	Standard play (44.1kHz)
	STANDARD (44.1k)	Standard play (44.1kHz)
	LONG	Standard play (44.1kHz)
Digital (48kHz)	STANDARD (48k)	Standard play (48kHz)
	STANDARD (44.1k)	Standard play (48kHz)
	LONG	Standard play (48kHz)

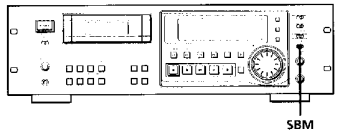
The recording time in long-play mode (the REC MODE switch set to LONG) is twice as long as standard-play mode.

The counter in long-play mode
The displayed tape running time, absolute time and remaining time on the tape are for standard-play mode. Double the time to obtain the corresponding times for long-play mode.

Note
Do not change the INPUT or REC MODE setting while recording. This may cause an error in the "PGM TIME" display.

Using the SBM (Super Bit Mapping) Function

The SBM function uses the principles of human hearing and noise-shaping technology to reduce quantizing noise within the frequency band.
You can use the SBM function to record on analog input signal only when the INPUT switch is set to ANALOG and the REC MODE switch to STANDARD (either 48kHz or 44.1kHz).

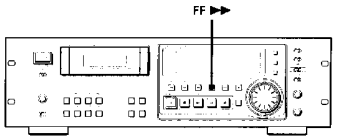


Set SBM to ON.
"SBM" appears in the display during recording using the SBM function.

Note
The SBM function operates only during recording. The improved sound produced by the SBM function, however, can be enjoyed during playback, regardless of the SBM switch position or the DAT deck being used.

Locating the End of the Recorded Portion (End Search)

When recording from the middle of a tape, use End Search to locate the end of the recorded portion. This will prevent the creation of a blank section on the tape.



Press FF ▶▶ with the deck stopped.
The deck locates the end of the recorded portion (the beginning of the blank portion or the position of the end ID), then stops.
The deck stops at the beginning of any blank section that is 9 seconds or longer, or fast-forwards to the end of the tape if the tape is blank.

When you press the REC ● button while in a blank section

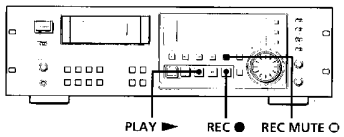
The deck rewinds the tape to the beginning of the blank section and changes to recording pause. "BLANK" and "WAIT" appear in the display while the deck is searching for the beginning of the blank section.

Note

End Search does not operate if you press the FF ▶▶ button while in a blank section.

Inserting a Sound-Muted Section While Recording (Record Muting)

Use Record Muting to insert a space of about 0.5 to 9.5 seconds between tracks.
For details on setting the duration of the blank space, see "REC MUTE" on page 24.



Press REC MUTE O where you want to insert a space while the deck is recording or in recording pause.
"REC" in the display starts flashing and tape transport continues, but no signal is recorded. After inserting a space, ❚❚ in the display stays on and the deck changes to recording pause.

To insert a blank space (of a duration different from that preset by menu setting)

Hold down the REC MUTE O button as long as you want.
When you release the REC MUTE O button, ❚❚ stays on and the deck changes to recording pause.
When the preset duration has passed, "REC" begins to flash faster and the MARGIN indication shows how long the REC MUTE O button has been pressed.

To insert a blank space of a duration shorter than the preset value

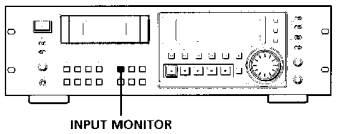
Press REC ● while "REC" is flashing. The deck starts recording again.

Note

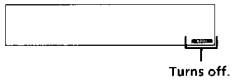
If you do not create a sound-muted section at the beginning of a tape, you may not be able to move or erase a start ID (see page 19) that is recorded within 2 seconds from the beginning of the tape.

Monitoring the Recorded Sound (Record Monitoring)

You can compare the recorded sound with the sound of the program source while recording.



While recording, press INPUT MONITOR to turn off "INPUT" in the display.
The recorded sound is output.



To listen to the program source

Press INPUT MONITOR to turn on "INPUT" in the display.

You can listen to the program source even when not recording

Press INPUT MONITOR to turn on "INPUT" in the display.
The program source is output when:
- the deck is stopped.
- the cassette is ejected.

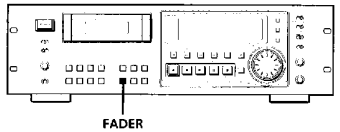
The program source is not output when "INPUT" is turned off.

Note

If you do any of the following operations while listening to the program source, "INPUT" turns off and output of the program source stops, and "INPUT" will not go on even you press the INPUT MONITOR button:
- Start playback by pressing the PLAY ► button.
- Pause playback by pressing the PAUSE ❚❚ button.
- Press the REW ◄◄ button.
- Press the FF ▶▶ button.

Fade-in/Fade-out Recording (Fader)

You can use the fader to fade-in the beginning of a recording or fade-out the end of a recording. It's useful when you want to start or end a recording in the middle of a song.
You can specify the fade-in and fade-out durations of 0.5 to 9.5 seconds through the menu settings.
For details, see "FADE IN" and "FADE OUT" on page 25.



Fading in

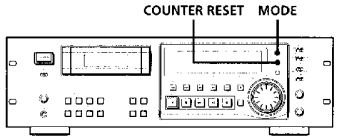
Press FADER while the deck is in record pause mode.
"FADE IN" appears in the display and the time display counts backward to "0.0s" as the fade-in takes place.

Fading out

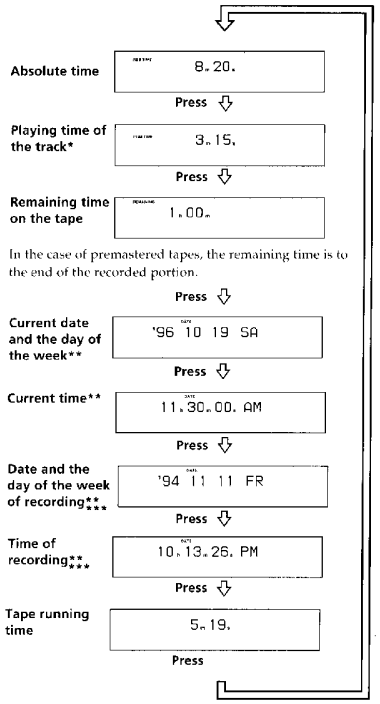
Press FADER while the deck is recording.
"FADE OUT" appears in the display and the time display counts backward to "0.0s" as the fade-out takes place. After fading out, the deck automatically enters record pause mode.

About the Display

You can use the display to show the tape running time, absolute time, playing time of the track, remaining time on the tape, date and time of recording, and current date and time.



Press MODE repeatedly.
Each time you press the MODE button, the displayed information changes as follows.



In the case of premastered tapes, the remaining time is to the end of the recorded portion.

* The playing time of the track will not be displayed when the "P-TMDISP" menu is set to "--" (see page 25).
** The date and time of recording and the current date and time will not be displayed when the "DATEDISP" menu is set to "--" (see page 25).
*** If this information is not recorded on the tape, nothing will appear.

To reset the tape running time
Press COUNTER RESET.

When "DATE" appears in the display
"DATE" remains lit when the date and day of the week or time of recording appears, and flashes when the current date and time appears.

Notes
- When playing certain types of premastered tapes, "BB" may appear momentarily in the display at the beginning of the tape.
- The playing time of the track does not appear in the following cases:
  — When you start playing from the middle of the track
  — During rewinding
- In standard-play mode, the remaining time on the tape appears about 16 seconds after you start playing.
- The displayed remaining time may vary somewhat from the actual remaining time, depending on the tape.

If "EMPHASIS" appears in the display

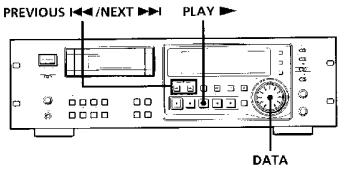
The deck is playing an audio signal recorded with emphasis (in the higher frequencies). The deck, however, plays the signal while automatically deemphasizing it (with attenuation proportional to the degree of emphasis).

"ERR" appears in the display for 5 seconds or more

- The head is dirty. Clean the head with the DAT cleaning cassette (see page 29).
- The cassette is defective or damaged.

Locating a Track (AMS*/Direct Access)

You can locate the tracks in a number of ways, but only after you have recorded start IDs on the tape (see pages 19 to 23). To use Direct Access, program numbers must be recorded on the tape (see pages 19 and 23).



To locate	Do the following:
The beginning of the next or succeeding tracks (AMS)	Press NEXT ►►I as many times as you want while playing. For example, to locate the second track ahead, press twice.
The beginning of the current track (AMS)	Press PREVIOUS I◄◄ once while playing.
The beginning of preceding tracks (AMS)	Press PREVIOUS I◄◄ as many times as you want while playing. For example, to locate the second track behind, press three times.
By specifying the program number of a track (Direct Access)	1 While the deck is playing or stopped, turn DATA on the front panel until the program number you want appears in the display (or enter the program number with the number buttons on the remote). 2 Press PLAY ►.

* AMS = Automatic Music Sensor

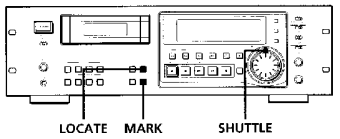
If you enter the wrong program number during Direct Access
If you haven't pressed the PLAY ► button, turn the DATA dial on the deck (or press the CLEAR button, then enter the correct number on the remote).

If the deck detects a blank section of 9 seconds or more, end ID, or the end of the tape
The deck rewinds the tape automatically to its beginning and stops (Auto Rewind).

You can make the deck start playing automatically from the beginning of the tape after rewinding (Auto Play)
Press the PLAY ► button while holding down the REW ◄◄ button.

Locating a Point (Shuttle Play/ Mark & Locate)

You can locate a specific point by playing back at a different speed or recording the absolute time code at the point to be located later.



To locate	Do the following:
A track using variable speed play (Shuttle Play)	While the deck is playing, stopped, or paused, turn SHUTTLE. • If the deck was playing or stopped, the deck starts to play when you release the SHUTTLE dial. • If the deck was paused, the deck pauses when you release the SHUTTLE dial.
A particular point on a tape (Mark & Locate)	1 While the deck is playing or stopped, press MARK. The absolute time of the point where you pressed the button appears and flashes three times. 2 Press LOCATE. The deck locates the point and stops.

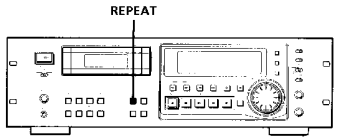
Playback speed during Shuttle Play
During Shuttle Play, you can vary the playback speed from ±0.5 to ±8 times the normal playback speed, depending on the angle and direction of the SHUTTLE dial. Turn the dial clockwise for forward playback or counterclockwise for reverse playback.
The playback speed will be ±8 times normal speed playback when you turn the dial to the left or right fully.

Note
Shuttle Play should be used only when necessary since prolonged use may damage the tape and drum.

The point memorized using the Mark & Locate function will be erased when:
— you take out the cassette.
— you turn off the deck.

Playing Tracks Repeatedly (Repeat Play)

You can play a specific track or all the tracks on the tape repeatedly.



Playing all tracks repeatedly

Press REPEAT repeatedly while playing a track until "REPEAT" appears in the display.
The deck will play all tracks 5 times, then stops.
If the deck detects either of the following during Repeat Play, it will rewind the tape to its beginning and start playing again.
— A blank section of 9 seconds or more
— The end of the tape or the end ID

To stop playing all tracks repeatedly
Press REPEAT repeatedly until "REPEAT" disappears.

Note
Repeat Play of all tracks is canceled when you take out the cassette.

Playing a track repeatedly

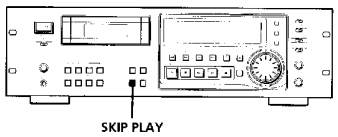
Press REPEAT repeatedly while playing the track you want to repeat until "REPEAT 1" appears in the display.
The deck plays the current track 5 times and then stops.
If the deck detects any of the following during Repeat Play, it will rewind the tape to the start ID of the current track and starts playing again from that position.
— The next start ID
— A blank section of 9 seconds or more
— The end of the tape or end ID
— A skip ID with Skip Play activated

To stop playing a track repeatedly
Press REPEAT repeatedly until "REPEAT 1" disappears.

Note
Repeat Play of a single track is canceled when you take out the cassette.

Playing Tracks Skipping Specific Portions During Playback (Skip Play)

Please note that skip IDs (see page 19) must be written on the tape before you can use Skip Play.



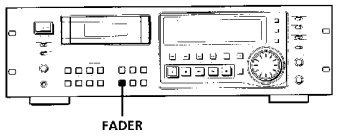
Press SKIP PLAY.
"SKIP PLAY" appears in the display. When the deck detects a skip ID, it fast-forwards the tape to next start ID, then resumes playing.

To cancel Skip Play
Press SKIP PLAY.
"SKIP PLAY" disappears.

Note
Skip Play is canceled when you take out the cassette.

Fade-in/Fade-out Playback (Fader)

You can use the fader to fade-in the beginning of playback or fade-out the end of Playback. It's useful when you want to record from DAT.
You can specify the fade-in and fade-out durations of 0.5 to 9.5 seconds through the menu settings.
For details, see "FADE IN" and "FADE OUT" on page 25.



Fading in

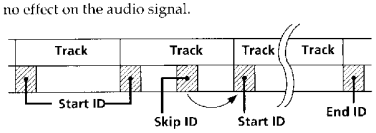
Press FADER while the deck is in play pause mode.
"FADE IN" appears in the display and the time display counts backward to "0.0s" as the fade-in takes place.

Fading out

Press FADER during playback.
"FADE OUT" appears in the display and the time display counts backward to "0.0s" as the fade-out takes place. After fading out, the deck automatically enters play pause mode.

About Sub Codes

In the DAT format, control codes, or sub codes, such as start IDs, skip IDs, and end ID can be recorded on the tape with the audio signal. Since sub codes are written on the tape separately from the audio signal, they have no effect on the audio signal.



Start IDs

Start IDs indicate the start of a track, and therefore allow you to locate the position of a track precisely. The start IDs are 9 seconds in length (18 seconds in long-play mode) to enable easy detection during fast-forwarding or rewinding.

Program numbers

Program numbers serve as track numbers. Occupying the same position as start IDs, a program numbers allow you to locate specific tracks or play tracks in a specific order.

Skip IDs

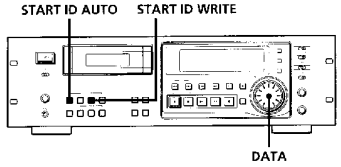
Skip IDs indicate tracks or recorded portions that are to be skipped while playing. Skip IDs are 1 second in length (2 seconds in long-play mode).

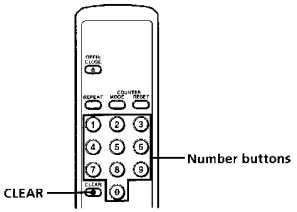
End ID (when the optional remote is used)

An end ID indicates the end of a recording. An end ID is 9 seconds in length (18 seconds in long-play mode). When an end ID is detected during playback, playback stops and the deck rewinds the tape to its beginning. If an end ID is detected during fast-forwarding, the tape stops at that point and deck becomes ready for recording from that point.
You can write and erase an end ID only with the optional remote RM-D750. For details, see "Writing and Erasing an End ID" on page 27.

Notes
- The OPEN/CLOSE ⏏, STOP ■ and PAUSE ❚❚ buttons do not work during the writing or erasing of sub codes.
- Writing and erasing of sub codes and renumbering of program numbers are impossible if the record-protect hole on the DAT cassette is open (see page 11).

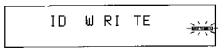
Writing Start IDs During Recording





Writing start IDs manually during recording

Press START ID WRITE.
"ID WRITE" appears in the display for a few seconds and the start ID is written on the tape. "START ID" flashes in the display during this time.



Note

The interval between start IDs must be more than 18 seconds (36 seconds in long-play mode). If the interval is less than 18 seconds (or 36 seconds), the deck may fail to detect the second start ID while playing a tape.

Writing start IDs automatically during recording

Press START ID AUTO repeatedly until "AUTO" appears in the display.

For details on the condition for the automatic writing of start IDs, see "Writing start IDs automatically during recording" on page 7, and "Menu Operations" on pages 24 and 25.

Writing program numbers during recording

Program numbers occupy the same positions as the start IDs and are determined by depending on the following conditions:

When a program number is displayed

The next program number rises by one above when the next start ID is written.

When no program number is displayed ("--" appears instead)

Program numbers are not written even when start IDs are written. To write program nunbers, rewind the tape to the nearest start ID to display the program number, and then locate the position where you want to start recording.

Specifying the first program number to be assigned

1 Pause recording.

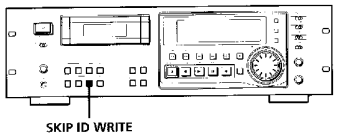
2 Press the number button(s) on the supplied remote, or turn DATA to input the first program number.
The number appears in the display.
To cancel the number, press the CLEAR button on the supplied remote.

3 Start recording.
A start ID and the assigned program number are written simultaneously.

Note

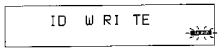
During automatic start ID writing the positioning of some start IDs may be inaccurately or inappropriately positioned away from the beginning of the track. If this happens, you can reposition or erase the start IDs later (see "Accurate positioning of sub codes" on pages 21and 22, and "Erasing Sub Codes" on page 23).

Writing Skip IDs During Recording



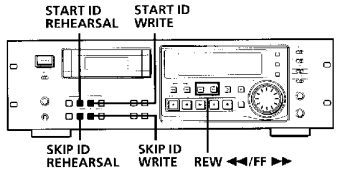
Writing skip IDs manually during recording

Press SKIP ID WRITE.
"ID WRITE" appears in the display for a few seconds and the skip ID is written on the tape. "SKIP ID" flashes in the display during this time.



Writing Sub Codes During Playback

You can write start IDs or skip IDs during playback.



Press START ID WRITE or SKIP ID WRITE.
"ID WRITE" appears in the display for a few seconds and the specified ID is written on the tape at the point you pressed the button.

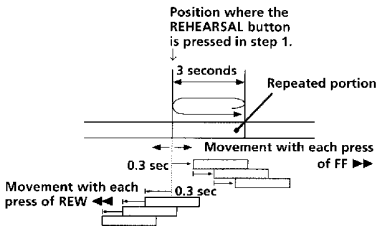
Accurate positioning of sub codes (Rehearsal function)

1 During playback, press REHEARSAL corresponding to the ID you want when you arrive at the proper position.
"REHRSL" appears, the corresponding ID indication flashes in the display and the Rehearsal function repeats a 3-second portion containing the selected position. The repeated portion plays back 8 times, with the remaining number of times appearing to the right of the "REHRSL". After 8 times, the deck stops.
In the case of a start ID, the 3-second repeated portion starts from the point where you pressed the REHEARSAL button.
In the case of a skip ID, the 3-second repeated portion ends at the point where you pressed the REHEARSAL button.

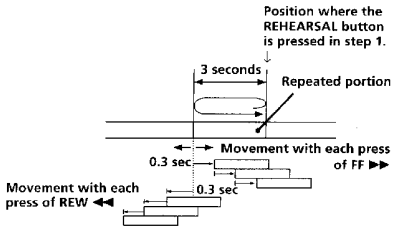
2 Press REW ◀◀ or FF ▶▶ to move the beginning of the repeated portion.
Each time you press the REW ◀◀ or FF ▶▶ button, the beginning of the repeated portion shifts backwards or forwards in 0.3-second increments, up to a maximum extent of about 2 seconds (4 seconds in long-play mode) in either direction.

(Continued)

When writing a start ID

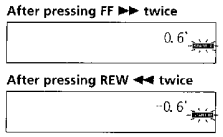

Position where the REHEARSAL button is pressed in step 1.
3 seconds
Repeated portion
Movement with each press of FF ▶▶
0.3 sec
Movement with each press of REW ◀◀
0.3 sec

When writing a skip ID


Position where the REHEARSAL button is pressed in step 1.
3 seconds
Repeated portion
Movement with each press of FF ▶▶
0.3 sec
Movement with each press of REW ◀◀
0.3 sec

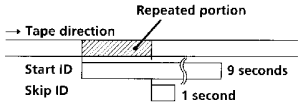
The time in the display shows the shift in position from the time the REHEARSAL button was pressed.

Positioning Start ID



3 Press WRITE of the corresponding ID to write the ID.
"ID WRITE" appears for a few seconds and the ID is written on the tape at the selected position.
- Start IDs are 9 seconds long starting from the beginning of the repeated portion.
- Skip IDs are 1 second long starting from the end of the repeated portion.

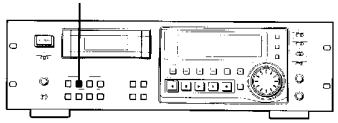
Newly written IDs positioned by the Rehearsal function



Adjusting the Position of an Existing Start ID

You can adjust the position of previously recorded start IDs.

START ID REHEARSAL



1 During playback, press START ID REHEARSAL when you arrive at the existing start ID you want to reposition.
The deck rewinds to the beginning of start ID and the Rehearsal function repeats a 3-second portion.

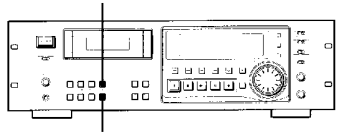
2 Do the steps 2 and 3 of "Accurate positioning of sub codes" on pages 21 and 22.
You can move the start ID to a maximum extent of about 2 seconds (4 seconds in long-play mode) in either direction from its original position.

Notes
- Start IDs written within 10 seconds from the end of the tape may be difficult or impossible to move.
- Existing skip IDs cannot be moved.

Erasing Sub Codes

You can erase any start ID or skip ID.

START ID ERASE



SKIP ID ERASE

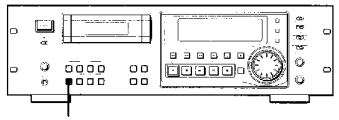
Press either START ID ERASE or SKIP ID ERASE when the ID you want to erase appears in the display.
"(ERASE)" appears in the display as the deck rewinds to the beginning of the ID, then "ID ERASE" appears as the deck erases the ID.
In the case of a skip ID, if "SKIP ID" has disappeared by the time you press SKIP ID ERASE, the deck will still erase the skip ID.
- It takes 9 seconds to erase a start ID.
- It takes 1 second to erase a skip ID.
- Program numbers are erased together with start IDs.

You can erase an ID even when it is not displayed
Just press the respective ERASE button. The tape is rewound, and the first ID detected is erased.

Note
A skip ID written at the same position of a start ID is erased when the start ID is erased.

Renumbering the Program Numbers Automatically (Renumbering Function)

The Renumbering function searches for each start ID from the beginning of the tape and assigns a new program number to each one starting with 1. Use the Renumbering function in the following cases:
- When you've added a start ID while playing the tape.
- When a program number is missing due to an erased start ID.
- When you began recording from the middle of the tape and wrote a program number that already exists, or when one of the start IDs has no program number.



RENUMBER

Press RENUMBER while the deck is stopped or playing.
"RENUMBER" flashes in the display and the tape is automatically rewound to its beginning. The deck then starts searching for each successive start ID writing a new program number for each one starting with 1.
"RENUMBER" stops flashing and "ID WRITE" appears in the display for a few seconds as the deck begins rewriting the program numbers.
After renumbering is finished, the deck rewinds the tape automatically to its beginning, then stops.

You can specify any number as the starting number for the renumbering of programs.
For details, see "FIRST (PGM No.)" on page 25.

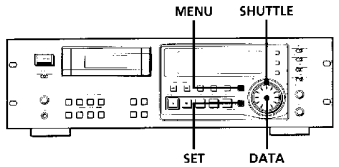
Note
The Renumbering function may not function correctly when:
- A blank section exists on the tape.
- The interval between two start IDs is less than 18 seconds (36 seconds in long-play mode).
- A start ID exists within 10 seconds from the end of the tape.

Menu Operations

You can make various settings through menu operations. Settings made through menu are memorized even when the deck is turned off.

Note

You can do menu operations only when the deck is empty, stopped or paused.



Making menu settings

1 Press MENU.
The MENU button lights up.

2 Turn SHUTTLE to select the menu.

3 Turn DATA to select the parameter.
The selected parameter flashes.

When the parameter settings are "on" and "--" (off)
Turn the DATA dial clockwise to select "on" or counterclockwise to select "--" (off).

4 Press SET.
The selected setting lights up.

5 Press MENU again.
The lit button goes off and the deck becomes ready for operation.

Menu descriptions

A brief explanation is given below for each menu, including their settings or setting range, factory setting, and reference pages.

SET ID6
Selects the copy information to be written on the tape when recording from the ANALOG(BALANCE/UNBALANCE) IN connectors or the DIGITAL AES/EBU IN connector.
Settings: 00 (copying permitted), 10 (copying prohibited), 11 (one generation copy only)
Factory setting: 00
Reference page: 6

REC MUTE (RECord MUTE duration)
Sets the duration if the blank space created between tracks by the Record Muting function.
Setting range: 0.5 to 9.5 seconds (in units of 0.5 second)
Factory setting: 4 seconds
Reference page: 14

L-SY TH (Level-SYnc THreshold)
Sets the reference input level for automatic writing of start IDs.
Setting range: –12 to –60 dB (in units of 1 dB)
Factory setting: –45 dB
Reference page: 20

L-SY BK (Level-SYnc BlanK time)
Sets the length of time that the input signal must remain below the reference level before automatic writing of start IDs begin.
Setting range: 1 to 10 seconds (in units of 1 second)
Factory setting: 3 seconds
Reference page: 20

IEC S-ID (IEC Start-ID)
Specifies if start IDs (or skip IDs) are automatically detected and written on the tape when recording from a DAT deck connected to the DIGITAL COAXIAL IN connector.
Settings: on (start IDs (or skip IDs) are automatically detected and written),
-- (writing of the start IDs (or skip IDs) is determined by the settings of the L-SY TH and L-SY BK menus)
Factory setting: on
Reference page: 7

IEC CD-Q (IEC CD-Q code)
Specifies if start IDs are written automatically whenever a Q code defined by the user's bits on the CD is detected while recording from a CD player connected to the DIGITAL COAXIAL IN connector.
Settings: on (a Q code is detected and written as a start ID automatically),
-- (writing of the start IDs is determined by the settings of the L-SY TH and L-SY BK menus)
Factory setting: on
Reference page: 7

AES S-ID (AES Start-ID)
Specifies if start IDs (or skip IDs) are automatically detected and written on the tape when recording from a DAT deck (for broadcast use) connected to the DIGITAL AES/EBU IN connector, and if start IDs (or skip IDs) are output through the DIGITAL AES/EBU OUT connector.
Settings: on (start IDs (or skip IDs) are detected and written automatically/start IDs (or skip IDs) are output),
-- (writing of start IDs (or skip IDs) is determined by the settings of th L-SY TH and L-SY BK menus/start IDs (or skip IDs) are not output)
Factory setting: --
Reference page: 7

Automatic writing of start IDs and menu settings during digital recording
The automatic detection and writing of start IDs are carried out according to the connector to which the program source is connected, the signal format, and the category code of the signal, as shown in the table below.

A: Start IDs are detected and written automatically.
B: Q codes are detected and written as start IDs automatically.
C: The writing of start IDs is determined by the settings of the L-SY TH and L-SY BK menus.

Menu settings

Connector	AES/EBU	COAXIAL			
Signal format	—	Broadcast studio use	Consumer use		
Category	—	—	DAT	CD	Others
IEC S-ID on	—	A*	A	—	C
IEC-S-ID --	—	C	C	—	C
IEC CD-Q on	—	—	—	B	C
IEC CD-Q --	—	—	—	C	C
AES S-ID on	A**	—	—	—	C
AES S-ID --	C	—	—	—	C

* Only when connected to the PCM-2300, PCM-2700, or PCM-2700A
** Only when connected to the PCM-2600, PCM-2800, PCM-R500 or PCM-R700.
When the connected decks consist of a PCM-R500 or PCM-R700, select "on" in the "AES S-ID" menu of the playback deck.

DATEDISP (DATE DISPlay)
Specifies if the recording date and time and current date and time are displayed when the MODE button is pressed.
Settings: on (the recording date and time and current date and time are displayed), -- (the recording date and time and current date and time are not displayed)
Factory setting: --
Reference page: 16

ODER (Date OrDER)
Specifies the display order of the year, month, and day indications.
Settings: YMD (year/month/day), DMY (day/month/year), MDY (month/day/year)
Factory setting: YMD
Reference page: 8

DATEHOUR (DATE HOUR)
Specifies either a 12-hour or 24-hour format for the time display.
Settings: 12 (12-hour format), 24 (24-hour format)
Factory setting: 12
Reference page: 8

P-TMDISP (Program TiMe DISPlay)
Specifies if the track playing time is displayed when the MODE button is pressed.
Settings: on (the track playing time is displayed), -- (the track playing time is not displayed)
Factory setting: on
Reference page: 16

FIRST(PGM No.) (FIRST ProGraM No.)
Specifies the first program number to be assigned to the first track when recording from the beginning of the tape or using the Renumbering function.
Setting range: 1 to 99
Factory setting: 1
Reference page: 23

TAPEID6 (ID6 on TAPE)
Displays the copy information of the tape currently inserted.
Indications: 00 (copying permitted), 10 (copying prohibited), 11 (one generation copy only)
Reference page: 6

CLK-SET (CLocK SET)
Set to "on" to set the clock.
Reference page: 8

BB-WRT (WRiTe "BB")
Specifies if a lead-in area is created automatically.
Settings: on (a lead-in area is automatically created), -- (a lead-in area is not automatically created)
Factory setting: --
Reference page: 12

BB-FS (FS in lead-in area)
Sets the lead-in area with the frequency of the signals to be recorded.
Settings: 48kHz, 44kHz, 32kHz
Factory setting: 48kHz
Reference page: 12

HOUR (HOURs meter)
Displays the total drum operating time.
Display range: 0 to 9999 hours (in units of 1 hour)

FADE IN (FADE IN time) (PCM-R700 only)
Specifies the fade-in time for fade-in recording and playback.
Setting range: 0.5 to 9.5 seconds (in units of 0.5 second)
Factory setting: 5.0 seconds
Reference pages: 15 and 19

FADE OUT (FADE OUT time) (PCM-R700 only)
Specifies the fade-out time for fade-out recording and playback.
Setting range: 0.5 to 9.5 seconds (in units of 0.5 second)
Factory setting: 5.0 seconds
Reference pages: 15 and 19

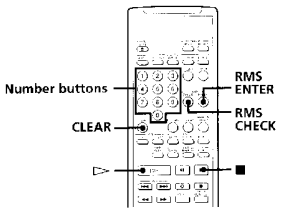
The Optional Remote RM-D750

You can do the following operations using serial remote control with an optional remote RM-D750 which may be either connected to the REMOTE 2 connector on the rear panel or not. For more information on other remote operations that are possible, refer to the Operating Instructions of the remote.

Note
Set REMOTE on the front panel to WIRED when the remote is connected to the deck. When using it remotely, set REMOTE to WIRELESS.

Playing tracks in the order you want (RMS* Play)

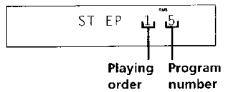
RMS Play allows you to specify the playback order of the tracks on the tape to create your own programs containing up to 60 tracks (using program numbers 1 to 99). To use RMS Play, however, you must first record start IDs and program numbers on the tape.



1 Enter the program number (1 to 99) of the track you want to play.

If you've entered the wrong number
Press CLEAR, then enter the correct number.

2 Press RMS ENTER.



3 Repeat steps 1 and 2.

4 Press ▷.
The deck starts playing the programmed tracks in sequence.

Checking the track order
You can check the order of tracks in your program by pressing the RMS CHECK button. Each time you press the RMS CHECK button, the track numbers appear in the order they were programmed.

Note
You cannot use the CLEAR button to cancel a programmed track while checking the track order.

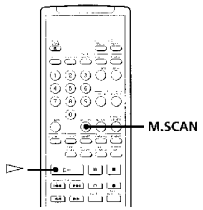
To add a track to a program
Repeat steps 1 and 2 while the deck is stopped.

Note
You cannot add a track to a program after RMS Play has started.

To cancel an entire program
Press ■ repeatedly until "RMS" disappears.

Locating a track by scanning each track (Music Scan)

You can locate a track by scanning the first 8 seconds of each track.



1 Press M.SCAN while the deck is stopped.

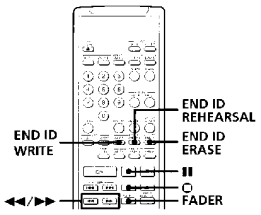
2 Press ▷.
The deck plays the first 8 seconds of each track in succession.

3 When you find the track you want, press M.SCAN.
The track continues playing.

You can use Music Scan while playing a track
If you press the M.SCAN button while playing a track, the deck will rewind the tape to its beginning, then play the first 8 seconds of each track on the tape in succession.

* RMS – Random Music Sensor

Writing and Erasing an End ID



Writing an end ID during recording

1 When the recording of the program source comes to an end, press ■, ○, or FADER.
Recording is paused.

2 Press END ID WRITE.
"ID WRITE" or "EE" appears in the display while the end ID is being written.
When writing has finished, the record pause mode is canceled and the deck rewinds the tape to the beginning of the end ID.

To write an end ID during playback
Press END ID WRITE.

More accurate positioning of the end ID

1 During playback, press END ID REHEARSAL.
"REHRSL" appears in the display, and the Rehearsal function repeatedly plays back a 3-second portion that ends at the point where you pressed the button. The repeated portion plays back 8 times, and the deck stops.

2 Press ◀◀ or ▶▶ to shift the position of the beginning of the repeated portion.
Each time you press ◀◀ or ▶▶, the beginning of the repeated portion shifts backwards or forwards by 0.3-second, up to a maximum extent of about 2 seconds (4 seconds in long-play mode) in either direction.
The display shows the amount the starting position has shifted from the time the END ID REHEARSAL button was pressed.

3 After repositioning the beginning of the end ID, press END ID WRITE.
"ID WRITE" appears for a few seconds and the end ID is written on the tape after a duration of about 9 seconds after the end of the the repeated portion.

Erasing the end ID

Press END ID ERASE.
"(ERASE)" appears in the display while the deck fast-forwards to the beginning of the end ID, then "ID ERASE" appears while the deck erases the end ID. It takes about 9 seconds (18 seconds in long-play mode) to erase an end ID.

You can use the End Search function to locate the end ID
See page 14.

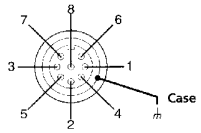
Remote Control Function Using a Parallel Remote Connector

You can operate the deck with a parallel remote control that uses a switch box connected to the REMOTE 1 connector on the rear panel.

Using the REMOTE 1 connector

When operating the deck with a parallel remote control, set the REMOTE switch on the front panel to WIRED.
The pin numbers and pin assignments for the REMOTE 1 connector on the rear panel are as follows:

DIN connector (8 pin)

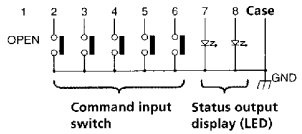


	Pin No	MODE1 (playback)	MODE2 (recording)
Inputs	1	H-level constant	L-level constant
	2	H-STOP/L-PLAY	L-STOP
	3	L-STOP	L-START ID WRITE
	4	L-PLAY	L-PLAY
	5	L-REW	L-PAUSE
	6	L-FF	L-REC
Status output	7	H-STOP	H-REC-PAUSE
	8	H-PLAY	H-REC
Case		GND	GND

Command inputs H: OPEN (off impedance: 30 kilohms or more)
L: GND short (on impedance: 100 ohms or less)

Status output H: approx 2V (I=15mA)
L: OPEN (High impedance)

Connection diagram (MODE 1)

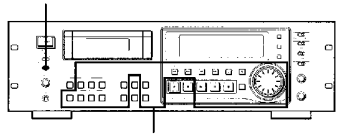


Notes
- When using MODE 2, use pin number 1 for GND.
- By keeping the input to pin number 1 constant at either H-level or L-level determines whether pin numbers 2 to 8 are in MODE 1 (playback) or MODE 2 (recording).
- In MODE 1, pin number 2 may be used for fader-start function.
- For pin numbers 2 to 6 pin, input to smaller numbers take priority.
- Anti-chattering measures should be taken for the command input switches.
- Status output (pin numbers 7 and 8) is specially provided for driving a single LED. If more current is needed, use an additional drive circuit or electric power supply.
- Do not switch input to pin number 1 (MODE 1 and MODE 2) while the deck is playing or recording. This may result in mis-operation of the deck.

Disabling Button Operations (Key Protect Function)

You can disable certain button operations so that the buttons do not work during, for instance, recording.

KEY PROTECT



All of these buttons and dials are disabled.

Set KEY PROTECT to ON.

Precautions

On safety
- Do not disassemble the cabinet as this may result in an electric shock. Refer servicing to qualified personnel only.
- Should any solid object or liquid fall into the cabinet, unplug the AC power cord before operating the unit any further.

On power sources
- Before operating the unit, check that its operating voltage is identical with your local power supply. The operating voltage is indicated on the nameplate at the rear of the unit.
- If you are not going to use the unit for a long time, be sure to disconnect the AC power cord (mains lead) from the wall outlet. To disconnect the cord, grasp the plug itself; never pull the cord.

On operation
If the unit is brought directly from a cold place to a warm place, or is placed in a very damp room, moisture may condense on the lenses inside the unit, "CAUTION" may appear in the display, and the unit may not operate. If this happens, remove the cassette and leave the unit turned on for about an hour until the moisture evaporates.

On placement
- Place the unit in a location with adequate ventilation to prevent heat build-up.
- Do not place the unit:
  — on a soft surface such as a rug that might block the ventilation holes on the bottom.
  — near heat sources.
  — in direct sunlight.
  — in an inclined position.
  — in a place subject to excessive dust or mechanical shock.

On the DAT tapes
- After using a DAT tape, put it into its case and keep it where it will not be subject to sunlight, high temperature, moisture or dust.
- The DAT cassette shell is designed to keep out dust. Do not open the case to expose the tape.
- The hole at the back of the cassette is the detector slot. Do not cover this slot.

Regarding tapes of over 120 minutes
Do not use thin-tape cassettes (with a playing time of over 120 minutes) to record important materials since such cassettes are subject to the following problems:
— Improper threading of the tape after repeated AMS, rewinding, fast-forwarding, or cueing operations.
— Incorrect writing and erasing of start IDs.
— Sound distortion.

If you have any questions or problems concerning your unit, please consult your nearest Sony dealer.

Cleaning

Cleaning the cabinet, panel and controls

Use a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

Cleaning the head and tape path

- Prolonged operation will cause contamination of the head. To obtain the best possible recording and playback sound, we recommend that you use the Sony DT-10CL cleaning cassette (not supplied) to clean the head after every ten hours or so of operation.
- Clean the head with the cleaning cassette when the deck has not been used for a long period of time. Contamination of the head may cause sound drop-out during playback.

Using the cleaning cassette
1 Insert the cleaning cassette as you would a normal DAT cassette.
2 Press PLAY ►. After 10 seconds, press STOP ■. Do not press the REC ● or FF ►► button for cleaning.
3 Remove the cleaning cassette without rewinding it. You should rewind the cleaning cassette only when it has reached the end.

Notes on cleaning
- After 10 hours of operation, "CLEANING" appears in the display for about ten seconds when you turn on the deck. It is recommended that you clean the head and tape path periodically, using this message as a guide.
- Due to the shortness of the cleaning cassette, the counter will not show the actual running time and remaining time of the cassette.

Display Messages

The following table explains the various messages that appear in the display.

Message	Meaning
BLANK	The deck is searching for the beginning of the blank section on the tape.
CAUTION	A safety mechanism is operating because of condensation or other reasons.
CLEANING	Cleaning the head and tape path is recommended. After about 10 hours of deck use, this message appears for about 10 seconds whenever you turn on the deck.
(ERASE)	The ID ERASE function is on.
ID ERASE	A start ID or skip ID is being erased.
ID WRITE	A start ID, skip ID, or program number is being written.
M.SCAN	The M.SCAN button on the remote has just been pressed or Music Scan playback of the beginning of a track is about to start.
NO TAPE	A cassette is not inserted into the deck.
PROHIBIT	The program source you are about to record cannot be recorded through the digital input jacks or connectors.
PROTECT	The record-protect hole on the cassette is open and recording on the tape cannot be done.
REHRSL	Rehearsal function is on.
SOURCE	The deck has been in recording pause for about 10 minutes, or you've pressed the REC ● button while no cassette is in the deck or the cassette is record-protected.
TAPE END	The tape has come to the end of the recorded portion.
TAPE TOP	The tape has reached its beginning.
UNLOCK	The digital signal being input to the jack or connector is different from the one selected with the INPUT switch.
WAIT	The deck is searching for the beginning of the blank section on the tape.
(WRITE)	The ID WRITE function is on.

Troubleshooting

If you've experienced any of the following difficulties while using the deck, use this section as a guide to remedy the problem. Should any problem persist, consult your nearest Sony dealer.

The cassette holder does not close.

➡ Check that the cassette is inserted correctly (see pages 9 and 10).

The function buttons do not work.

➡ The deck has just been turned on and will not operate for about 4 seconds. Wait 4 seconds (10 seconds when "CLEANING" appears) before attempting any operation.

➡ The PAUSE ❚❚ button is activated. Press PAUSE ❚❚ to cancel pause.

➡ The tape has reached its end. Press REW ◀◀ to rewind the tape.

No sound.

➡ The deck is not properly connected. Make the proper connections (see pages 5 and 6).

➡ The connected amplifier is not being operated properly. Operate the amplifier as required for the respective deck operation. (Refer to the operating instructions of the amplifier.)

The deck does not record.

➡ The record-protect hole on the cassette is open. Slide the record-protect tab to close the hole (see page 11).

➡ The INPUT switch is incorrectly set. Set INPUT, ANALOG INPUT or DIGITAL IN/OUT to the correct position.

➡ The REC LEVEL CH-1(L)/2(R) controls are set at 0. Turn them clockwise to raise the recording level (only during analog recording).

The OPEN/CLOSE ⏏ button does not work.

➡ The OPEN/CLOSE ⏏ button does not function during recording. Press STOP ■ or PAUSE ❚❚ to stop recording first, then press OPEN/CLOSE ⏏.

"CAUTION" appears and the deck cannot be operated.

➡ A safety mechanism is operating because of condensation. Remove the cassette and leave the deck turned on for about an hour. Then turn the deck off, then on again (see page 29).

Writing or erasing of sub codes is not possible.

➡ The record-protect hole on the cassette is open. Slide the record-protect tab to close the hole (see page 11).

Start ID writing is not possible during recording.

➡ The start ID cannot be written within 18 seconds (36 seconds in long-play mode) after the end of the previous start ID. Make sure at least 18 seconds (36 seconds in the long-play mode) has passed after the last start ID and before writing a new one.

The search function does not stop at the specified track.

➡ The specified program number does not exist on the tape. Press RENUMBER to renumber the program numbers (see page 23).

➡ The program numbers are out of order. Press RENUMBER to renumber the program numbers (see page 23).

The search function operates suddenly during playback.

➡ Skip Play is on.
Press SKIP PLAY to turn off "SKIP PLAY" in the display and cancel Skip Play.

➡ Repeat Play is on.
Press REPEAT repeatedly to turn off "REPEAT" or "REPEAT 1" in the display and cancel Repeat Play.

The tape operation buttons do not function while writing or erasing a start ID, a skip ID or an end ID.

➡ All buttons do not work during the 9 seconds the start ID or end ID is being written or erased (18 seconds in long-play mode) or during the 1 second the skip ID is being written or erased (2 seconds in long-play mode). Wait until the writing or erasing the start, skip or end ID finishes before operation.

Absolute time codes writing is not possible.

➡ Recording began within a blank section. Rewind the tape to its beginning, or locate the end of the recorded portion with End Search before starting recording.

Tape transport is excessively loud during fast-forwarding or rewinding.

➡ The noise is caused by the cassette and is not a mechanical problem.

The tape stops suddenly.

➡ The cassette is defective or damaged.
Press OPEN/CLOSE ⏏ and replace the cassette with a new one.

The built-in clock does not keep proper time once the power is turned off.

➡ The battery in the deck is weak.
Have the battery replaced by Sony service personnel (entails a service fee).

After pressing REW ◀◀/FF ▶▶ or PREVIOUS I◀◀/NEXT ▶▶I, the tape stops momentarily before starting to move.

➡ This is normal and is not a mechanical problem.

The deck cannot be operated with the remote (supplied).

➡ The battery is weak. Change both batteries.

➡ Set the REMOTE switch to WIRELESS.

The deck cannot be operated with the optional remote RM-D750.

➡ Set the REMOTE switch according to the connection between the deck and the remote (see page 26).

"SBM" does not appear in the display even though SBM is set to ON.

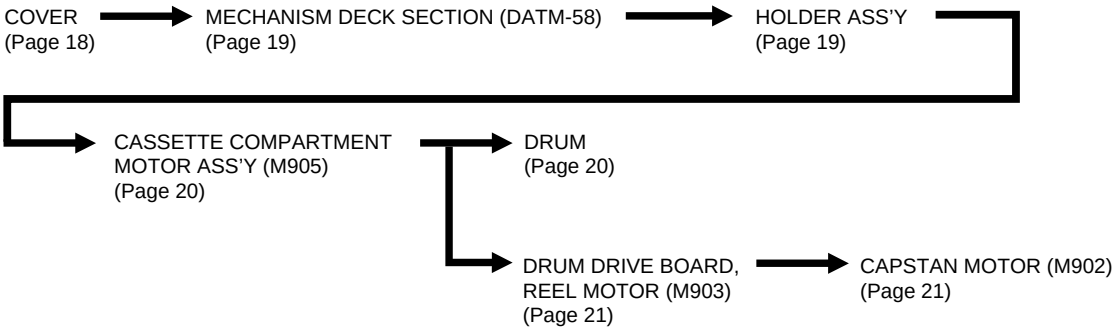
➡ "SBM" appears only during the recording of analog input signals with a sampling frequency of 48 kHz or 44.1 kHz, not during the recording of a digital input signal, or an analog input signal with a sampling frequency of 32 kHz, or during playback.

A paticular operation cannot be done as you want.

➡ Set the appropriate menu to its default setting.

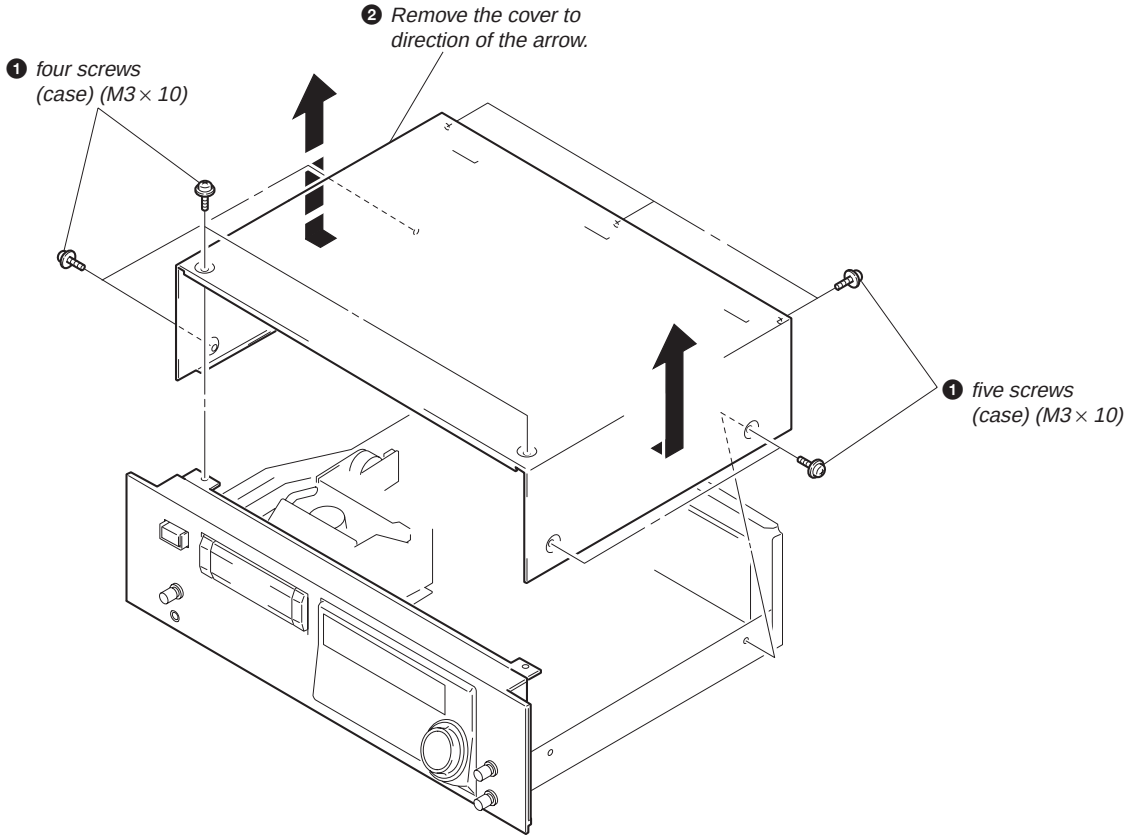
SECTION 2
DISASSEMBLY

• This set can be dissassembled in the order shown below.

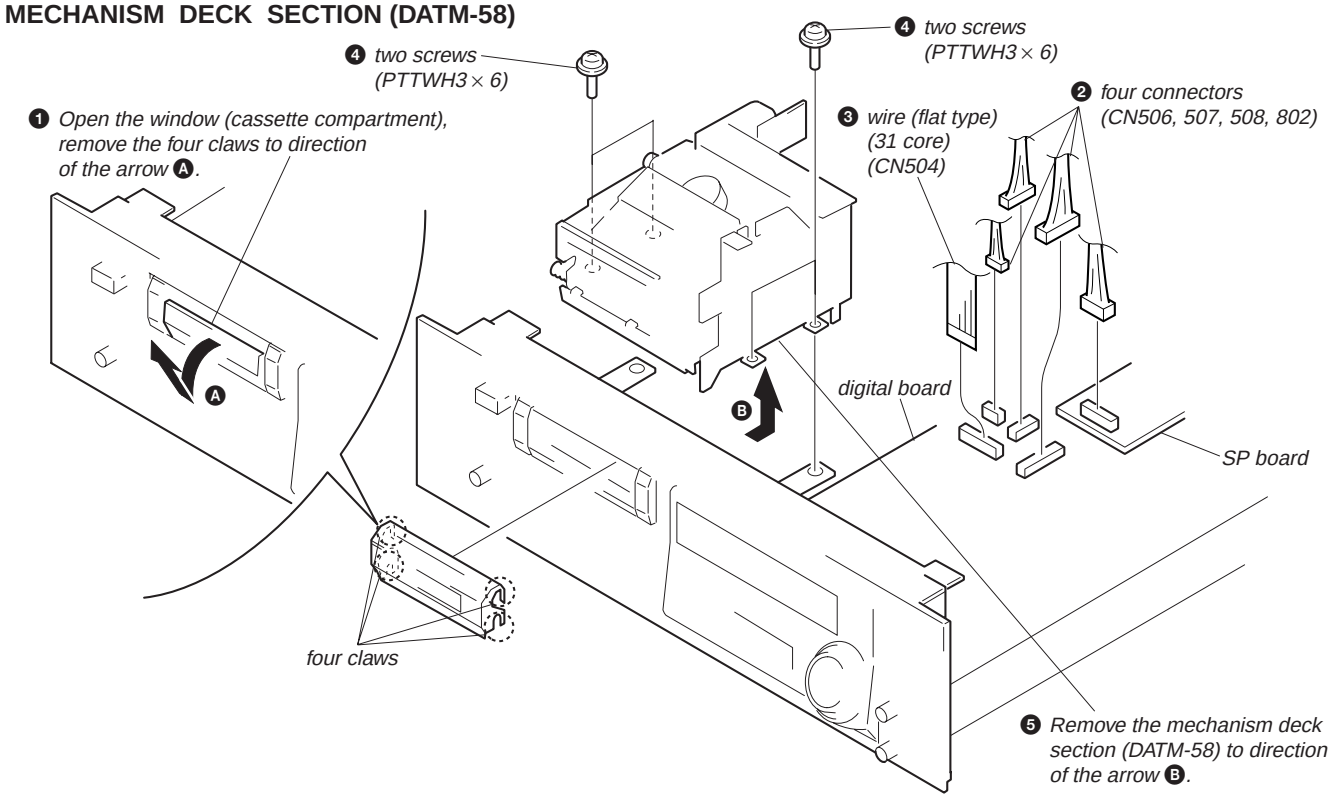


Note: Follow the disassembly procedure in the numerical order given.

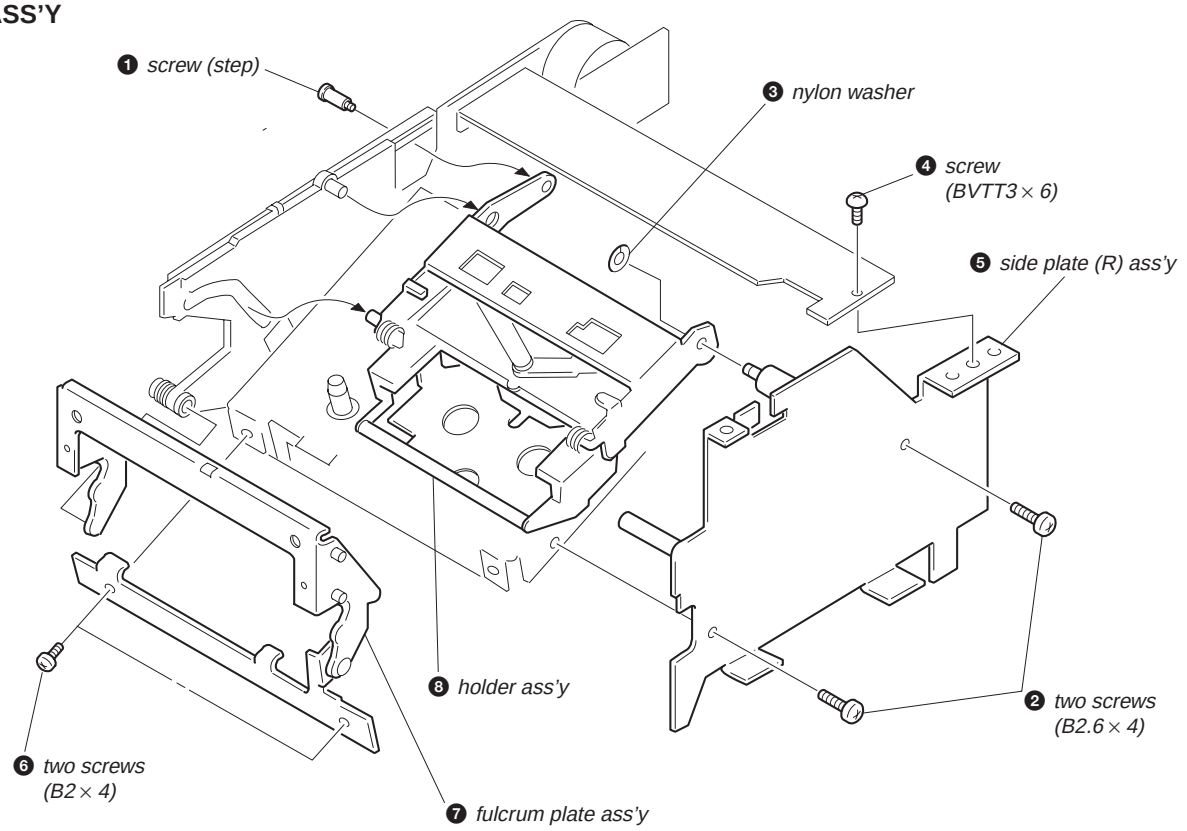
COVER



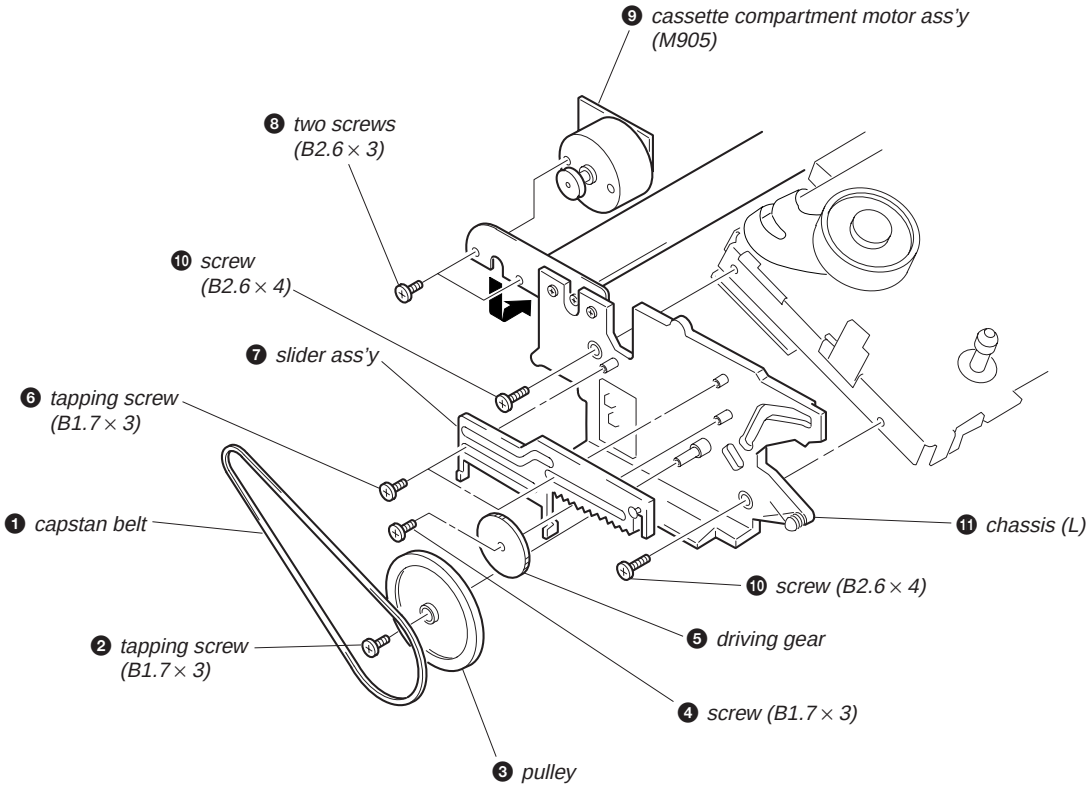
MECHANISM DECK SECTION (DATM-58)


❹ two screws (PTTWH3 × 6)
❹ two screws (PTTWH3 × 6)
❷ four connectors (CN506, 507, 508, 802)
❶ Open the window (cassette compartment), remove the four claws to direction of the arrow Ⓐ.
❸ wire (flat type) (31 core) (CN504)
digital board
SP board
four claws
❺ Remove the mechanism deck section (DATM-58) to direction of the arrow Ⓑ.

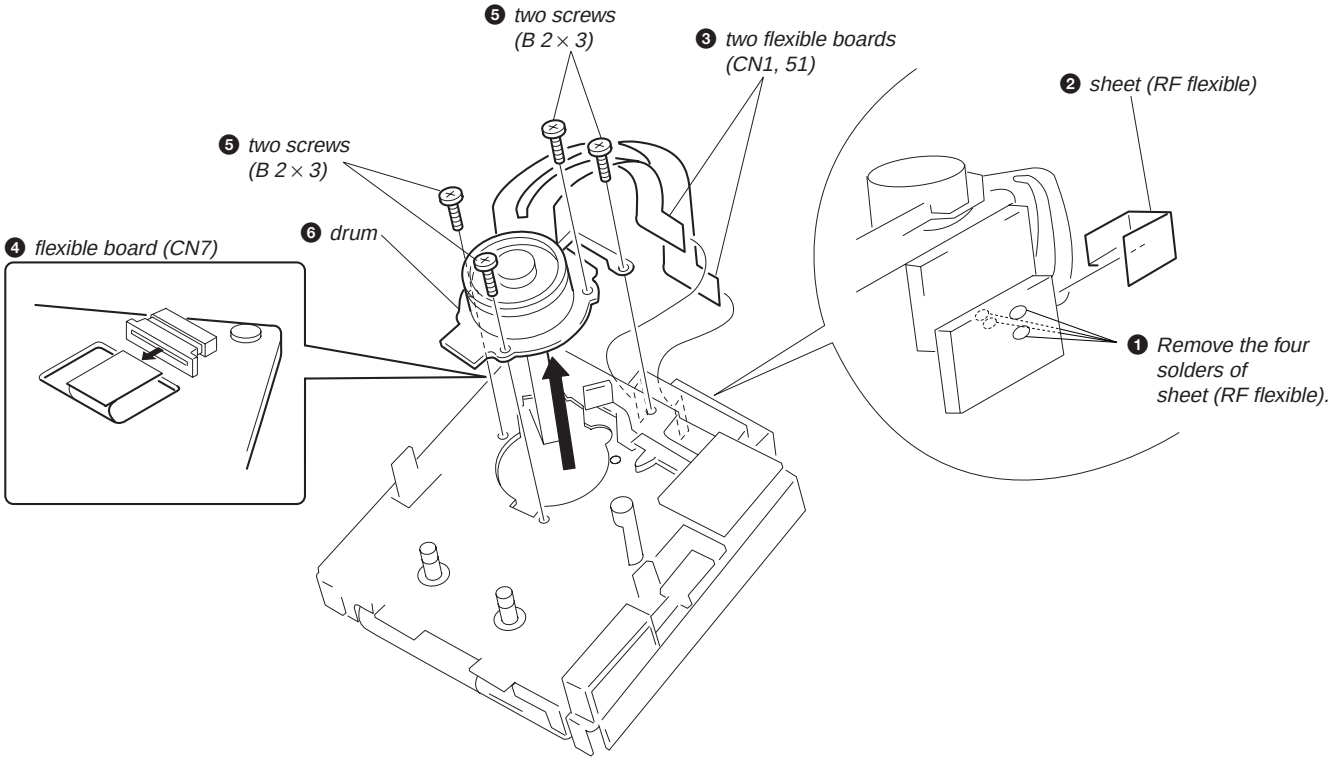
HOLDER ASS'Y


❶ screw (step)
❸ nylon washer
❹ screw (BVTT3 × 6)
❺ side plate (R) ass'y
❽ holder ass'y
❷ two screws (B2.6 × 4)
❻ two screws (B2 × 4)
❼ fulcrum plate ass'y

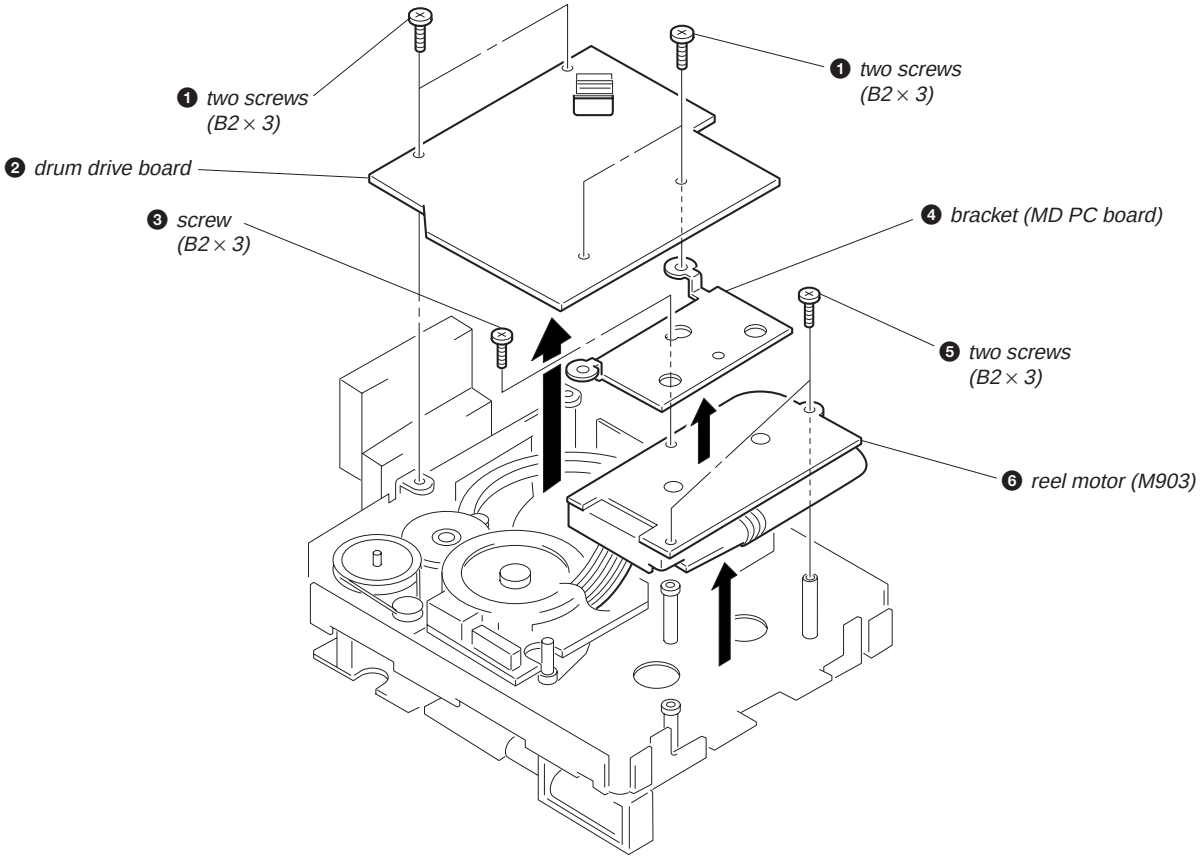
CASSETTE COMPARTMENT MOTOR ASS'Y (M905)


❾ cassette compartment motor ass'y (M905)
❽ two screws (B2.6 × 3)
❿ screw (B2.6 × 4)
❼ slider ass'y
❻ tapping screw (B1.7 × 3)
❶ capstan belt
⓫ chassis (L)
❿ screw (B2.6 × 4)
❺ driving gear
❷ tapping screw (B1.7 × 3)
❹ screw (B1.7 × 3)
❸ pulley

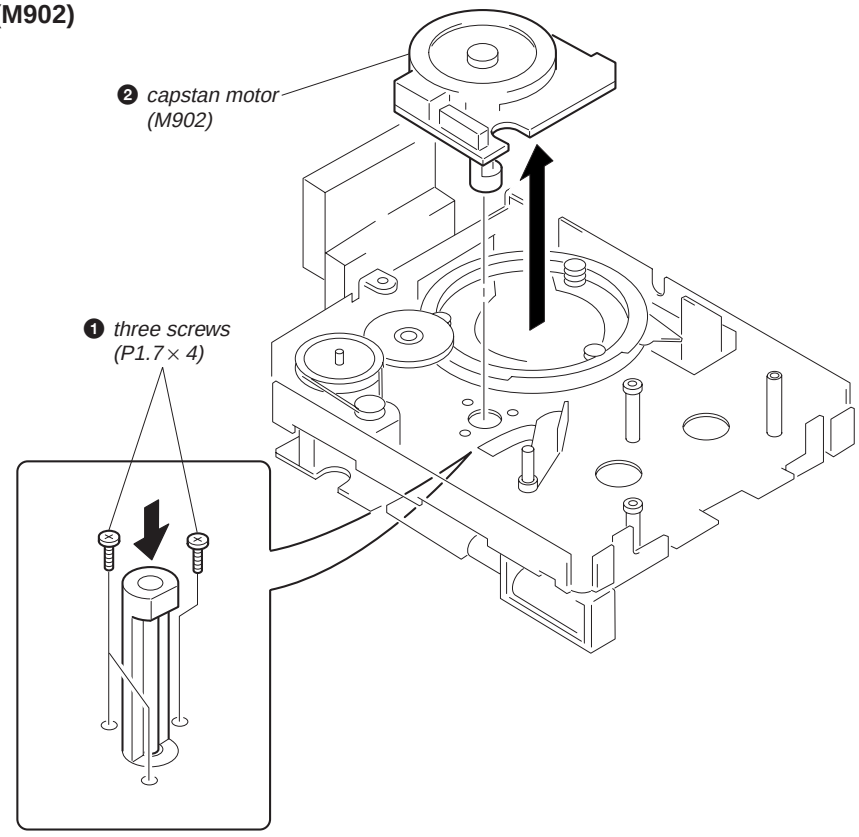
DRUM


❺ two screws (B 2 × 3)
❸ two flexible boards (CN1, 51)
❷ sheet (RF flexible)
❺ two screws (B 2 × 3)
❻ drum
❹ flexible board (CN7)
❶ Remove the four solders of sheet (RF flexible).

DRUM DRIVE BOARD, REEL MOTOR (M903)



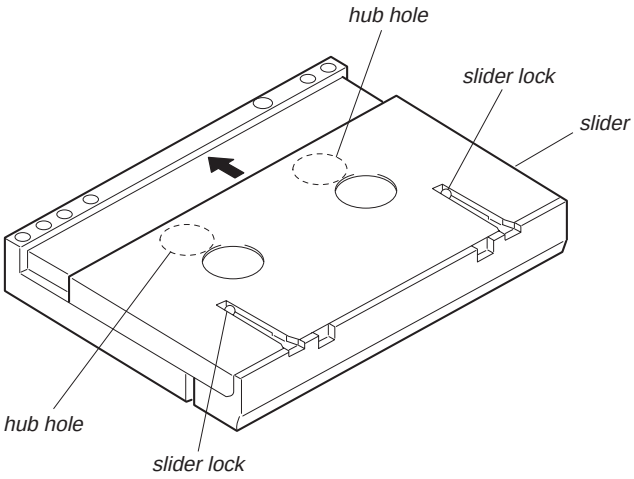
CAPSTAN MOTOR (M902)



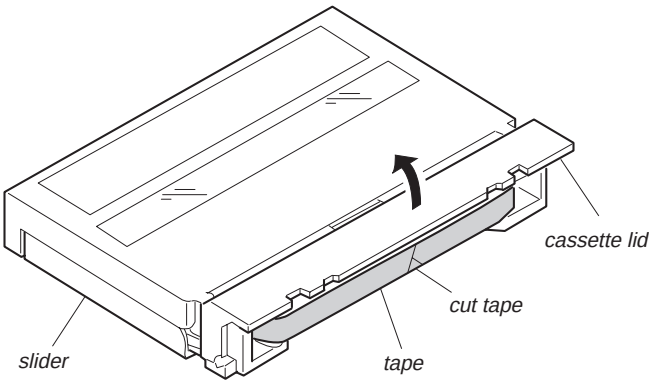
SECTION 3
ADJUSTMENTS

PRECAUTION

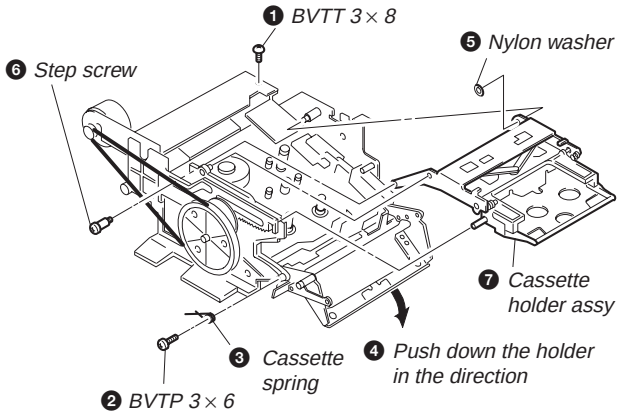
1. The adjustments are performed in the sequence that they are described.
2. The required test tapes are:
   TY-7111 (8-909-812-00) ..... Level
   TY-7252 (8-909-822-00) ..... Tracking
   TY-7551 (8-909-814-00) ..... Function
   TY-30B (8-892-358-00) ..... Blank
   The required torque meter is:
   TW-7131 (8-909-708-71) ..... FWD
3. Switch and Control Settings
   REMOTE switch : OFF
   REC MODE switch : 48k (STANDARD)
   REC LEVEL control : Minimum
   PHONE LEVEL control : Minimum
4. Preparation of End Sensor Cassette
   (1) Push the slider locks of a cassette tape and slide the slider in the direction of the arrow.



   (2) Open the cassette lid and cut tape.



   (3) Turn the hubs to take-up tape (for both T and S sides). The end sensor cassette tape for end sensor adjustment is now prepared.
5. Take care never to turn RV1 and RV2 within the RF AMP board of the cassette compartment section.
6. When adjusting tape pass and each guide, as shown below, it is a good practice to remove the holder assy and use the DAT cassette holder (J-8000-002-A). This facilitates adjustment work.
   - When removing and installing the holder assy, turn the pulley counterclockwise and set loading OUT condition for easy removal and installation.
   - When adjusting, turn the pulley clockwise and turn on the CASSETTE TABLE IN switch (S2) to set loading IN condition. Then, set the test tape.


❶ BVTT 3× 8
❺ Nylon washer
❻ Step screw
❼ Cassette holder assy
❸ Cassette spring
❹ Push down the holder in the direction
❷ BVTP 3× 6

7. Test Mode
   - To enter the test mode, short between TP (MAIN-TEST) and the GND on the DIGITAL board, then turn on the power. The meter scale within the fluorescent indicator tube (FL701) will flash.
     Press the OPEN/CLOSE ⏏ key and set the test tape. (The specified tape should be used for each adjustment.)

     Test Mode (Short between TP (MAIN-TEST) and GND)
     ① Have "DPG" display lit in the fluorescent indicator tube. (Press the AMS ▶▶I key.)
       - S2, T2 and F Guide Adjustments
       - End Sensor Adjustment
       - Tape Pass Fine Adjustment (×1.5FWD mode)
       - DPG Adjustment

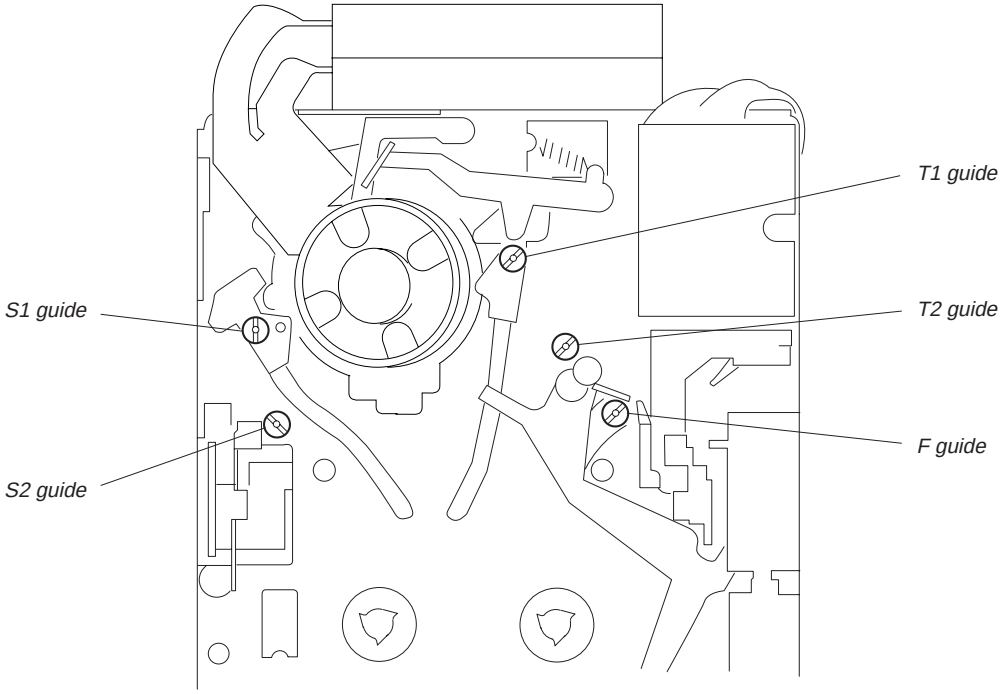
     ② Have "TR" display lit in the fluorescent indicator tube. (Press the ▶ key.)
       - FWD Torque Adjustment
       - FWD Back Tension Adjustment

       (Torque measurement mode)

   - To release the test mode, remove the short between TP (MAIN-TEST) and GND. After necessary adjustment is completed, be sure to release the test mode.

8. After adjustment is completed, perform the following checks to verify the tape speed.
   (1) Check that with the REC MODE switch set to STANDARD 48k, tape is normally recorded and played back. (×1)
   (2) Check that with the REC MODE switch set to LONG, tape is normally recorded and played back. (×0.5)
   (3) Check that in performing the CUE (▶ + ▶▶) or REVIEW (▶ + ◀◀) operation, "kyur kyur" sound is heard. (×3, ×8)
   (4) Check that after performing the FF (▶▶) or REW (◀◀) operation, the time display is appropriate. (×16)
   (5) Check that the AMS (▶▶I, I◀◀) operation is normal.

Adjustment Location: mechanism deck block



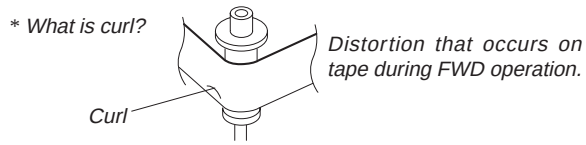
3-1. MECHANICAL ADJUSTMENTS

When replacing any drum related parts, after S2, T2 and F guide adjustments have been made, tape pass fine adjustment (×1.5FWD mode) in Electrical adjustment should be performed.

S2, T2 and F Guide Adjustments

Adjustment Method:

1. Enter the Test Mode ① (see page 22.) and set the test tape TY-7252 (8-909-822-00).
2. Set the REC MODE switch to STANDARD 48k and press the AMS ▶▶I key.
   While in FWD mode, check that there is no curl on the upper and lower flanges of the S2, T2 and F guides.
   If any curl is present, put the S2, T2 and F guide of concern back in the high position and adjust by adjusting the direction of tightening.



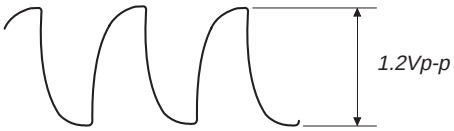
3-2. ELECTRICAL ADJUSTMENTS

End Sensor Adjustment

When removing the holder assy and when replacing the mechanism deck block, this adjustment should be performed.

Adjustment Method:

1. Connect the CH-1 terminal of an oscilloscope to TP (S-END) and the CH-2 terminal to TP (T-END) on the DIGITAL board.
2. Enter the Test Mode ① (see page 22.) and set the end sensor cassette tape (see page 22.)
3. Set the STOP (■) mode.
4. Adjust RV502 (S-END) and RV501 (T-END) on the DIGITAL board so that the respective peak to peak values of the waveforms on the oscilloscope are 1.2 Vp-p.



Adjustment Location: See page 26.

FWD Torque Adjustment

Adjustment Method:

1. Enter the Test Mode 2 (Torque Measurement Mode) (see page 22.) and set the torque meter TW-7131 (8-909-708-71).
2. Press the PLAY (▶) key.
3. Press the ▶▶ key or ◀◀ key and adjust so that the FWD torque value (T side take-up torque) is within the range of 11 to 13 g•cm.
4. When the torque meter is circulating around, check the indicated value.

FWD Back Tension Adjustment

Adjustment Method:

1. Enter the Test Mode ② (Torque Measurement Mode) (see page 22.) and set the torque meter TW-7131 (8-909-708-71).
2. Press the PLAY (▶) key.
3. Press the AMS ▶▶I key or I◀◀ key and adjust so that the back tension (S side) is within the range of 8.5 ± 0.5 g•cm.
4. When the torque meter is circulating around, check the indicated value.
5. Verify that the maximum value is less than 19.5 g•cm.

REV Torque Check and REV Back Tension Check

Check Method:

1. After FWD torque adjustment and FWD back tension adjustment are completed, press the PLAY (▶) key again and set REV (◀) mode.
2. Check that the REV torque value is within the range of 13.5 to 17.5 g•cm and that the REV back tension value is within the range of 7.5 to 11.5 g•cm.

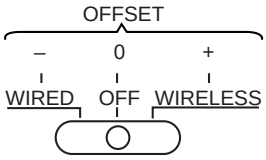
Tape Pass Fine Adjustment (×1.5FWD Mode)

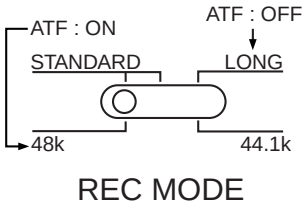
When replacing any drum related parts, be sure to perform this adjustment.

Adjustment Method:

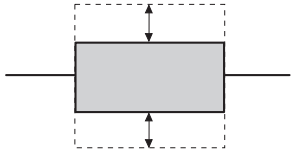
1. Connect the CH-1 terminal of an oscilloscope to TP (RF) and the CH-2 terminal to TP (SWP) on the DIGITAL board.
2. Enter the Test Mode ① (see page 22.) and set the test tape TY-7252 (8-909-822-00).
3. Press the AMS (▶▶I) key.

Role of each switch in test mode.



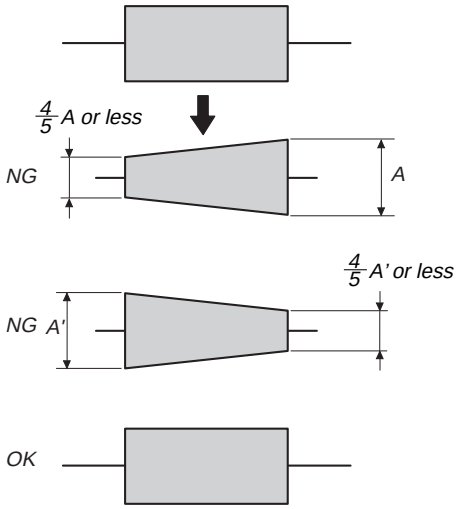


4. Put the REC MODE switch to the LONG (ATF: OFF) position and put the REMOTE switch to either the WIRED or WIRELESS position (OFFSET: – or +), fine adjust both the S1 guide and T1 guide so that the RF signal waveform of the oscilloscope repeatedly contracts and expands in vertical directions as it has the same shape.

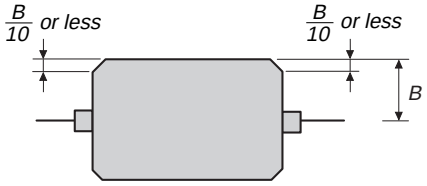


* Adjust the direction of tightening to complete this adjustment. If there is curl on any of the upper and lower flanges of the S2, T2 and F guides, adjust the guide of concern.

5. Put the REC MODE switch to the STANDARD 48k (ATF: ON) position and put the REMOTE switch to either the WIRED or WIRELESS position (OFFSET: – or +), then check the RF signal waveform.



6. Put the REC MODE switch to the STANDARD 48k (AFT: ON) position and put the REMOTE switch to the OFF position (OFFSET: 0), then check the RF signal waveform.
   (1) Verify that the peak value (B) of the RF signal waveform is 60mV or more.
   (2) Verify that the flat position of the RF signal waveform has undershoots of 10% or less.



7. If any of the specified values are not satisfied, repeat items 3 to 6.

Adjustment Location: See page 23.

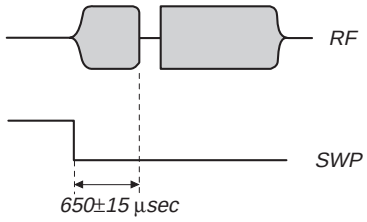
DPG Adjustment

When replacing any drum related parts, be sure to perform this adjustment.

Adjustment Method:

1. Connect the CH-1 terminal of an oscilloscope to TP (RF) and the CH-2 terminal to TP (SWP) on the DIGITAL board.
2. Enter the Test Mode ① (see page 22.) and set the test tape TY-7252 (8-909-822-00).
3. Put the REC MODE switch to the STANDARD 48k (ATF: ON) position and put the REMOTE switch to the OFF position (OFFSET: 0).
4. Press the AMS (▶▶I) key.
5. Press the PLAY (▶) key.
6. "DPG OK" is displayed in the fluorescent indicator tube.

Check that there is a difference of 650 ± 15 µsec between the oscilloscope's SWP signal and the RF signal.



Adjustment Location: See page 26.

CHECK AND REPLACEMENT FOR DATE FNCTION

Clock IC Back-up Check

- When replacing the lithium battery (BATT501) or replacing any of the clock IC (IC518) and peripheral parts, the clock will be reset.
  (The DATE display will be ['-- -- --] [--$_h$--$_m$--$_s$] even when the [PRESENT] button is pushed.)
  Perform the back-up check by the following procedure.
  (1) Connect a DC voltmeter between the DIGITAL board's TP (BATT+) as (+) side on the TP (BATT–) as (–) side.
  (2) With the POWER switch of the set OFF, check that the voltage (1) is less than +20 mV.
  (If the measured value is more than +20 mV, inspect the IC518 and peripheral parts and replace as needed.)
  (3) With the POWER switch of the set ON, check that the voltage (1) is less than 0 mV (minus indication), (If plus indication, inspect the D510 and peripheral parts and replace as needed.)
  (4) When these voltages are normal, set the clock to the current date and time according to the instruction manual.
  (year/month/day/day of week/hours/minutes/seconds)*
  (5) After the clock is set in item (4), turn off the POWER switch once and in several seconds, turn on the power again and make sure that the clock is operating.

Adjustment Location: See page 26.

Replacement of Back-up Battery

The back-up battery for clock is designed to serve for more than seven years under normal service conditions (room temperature and ordinary humidity).

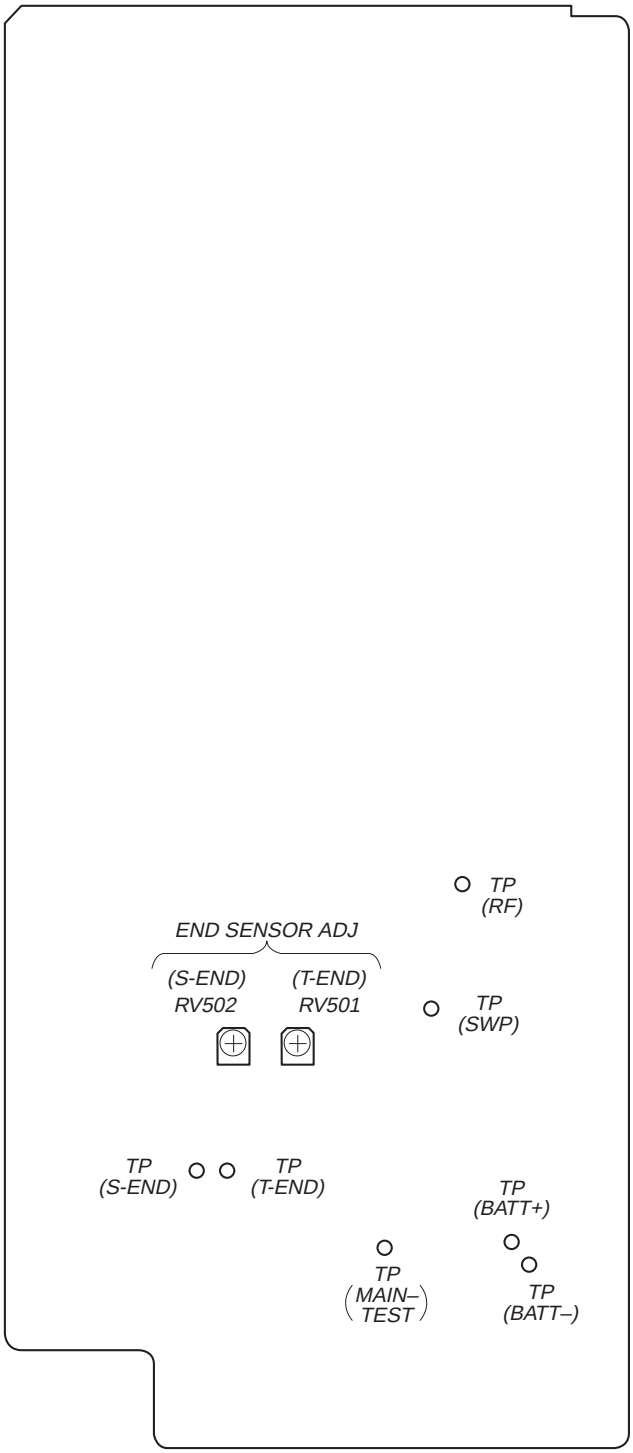
When replacing the battery, take note of the following:

- Perform the above “Clock IC Back-up Check” and remedy the cause of battery consumption.
- The open voltage of the battery as removed is 3.0 V or more when it is new. If this voltage is 2.0 V or less, then battery is fully consumed and needs to be replaced.
- After the battery is replaced, perform the “Clock IC Back-up Check” again and set the clock.
- The coin type lithium battery (CR2032) is used for replacement.

* For description of the clock setting, see page 6.

Adjustment and Check Locations :

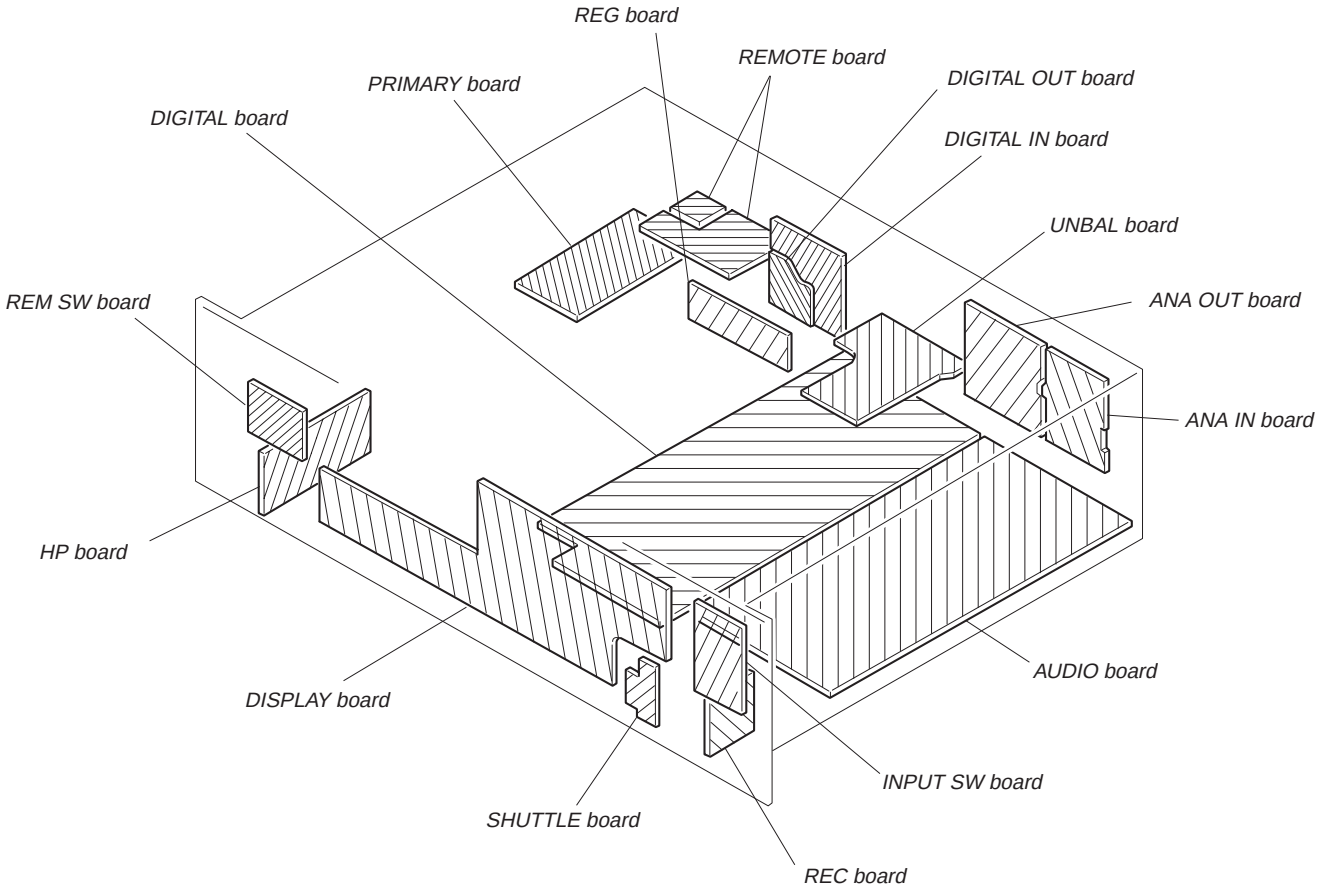
DIGITAL board – component side –

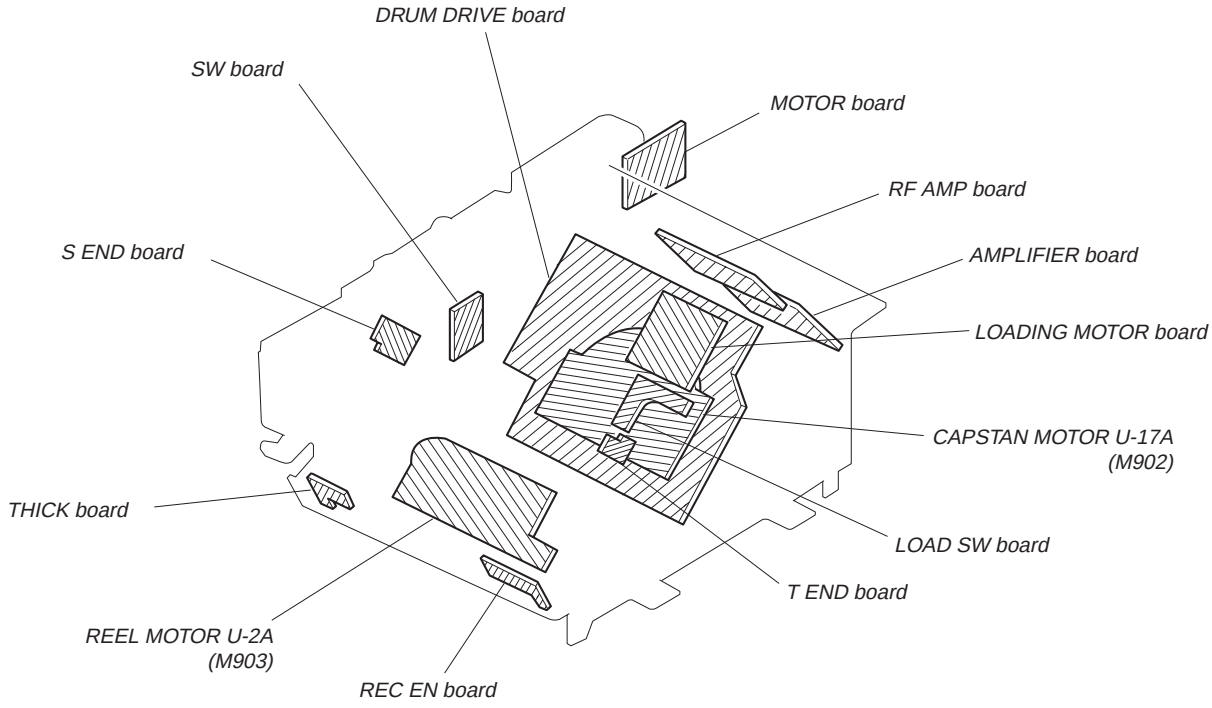


SECTION 4
DIAGRAMS

• Circuit Boards Location

Note: AUDIO board and DIGITAL board are supplyed as MAIN board.

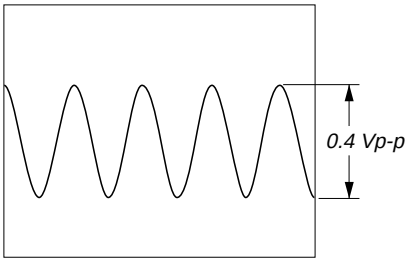




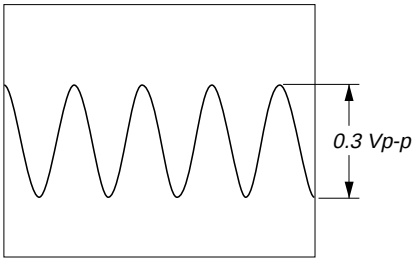
• **Waveforms**

– DIGITAL SECTION –

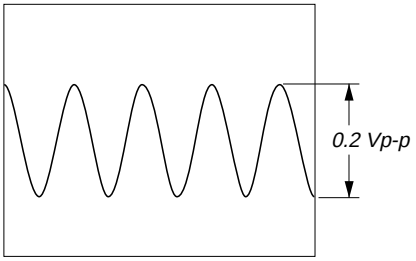
❶ IC503 ⑭ 18.816 MHz



❷ IC503 ㊺ 24.576 MHz

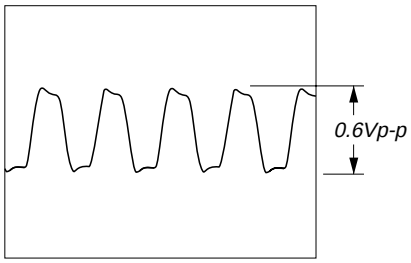


❸ IC518 ⑦ 32.768 kHz

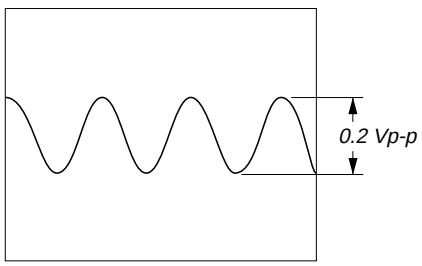


– AUDIO SECTION –

❹ X302 22.5792 MHz

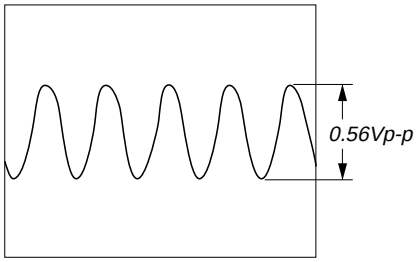


❺ IC310 ⑩ 24.576 MHz

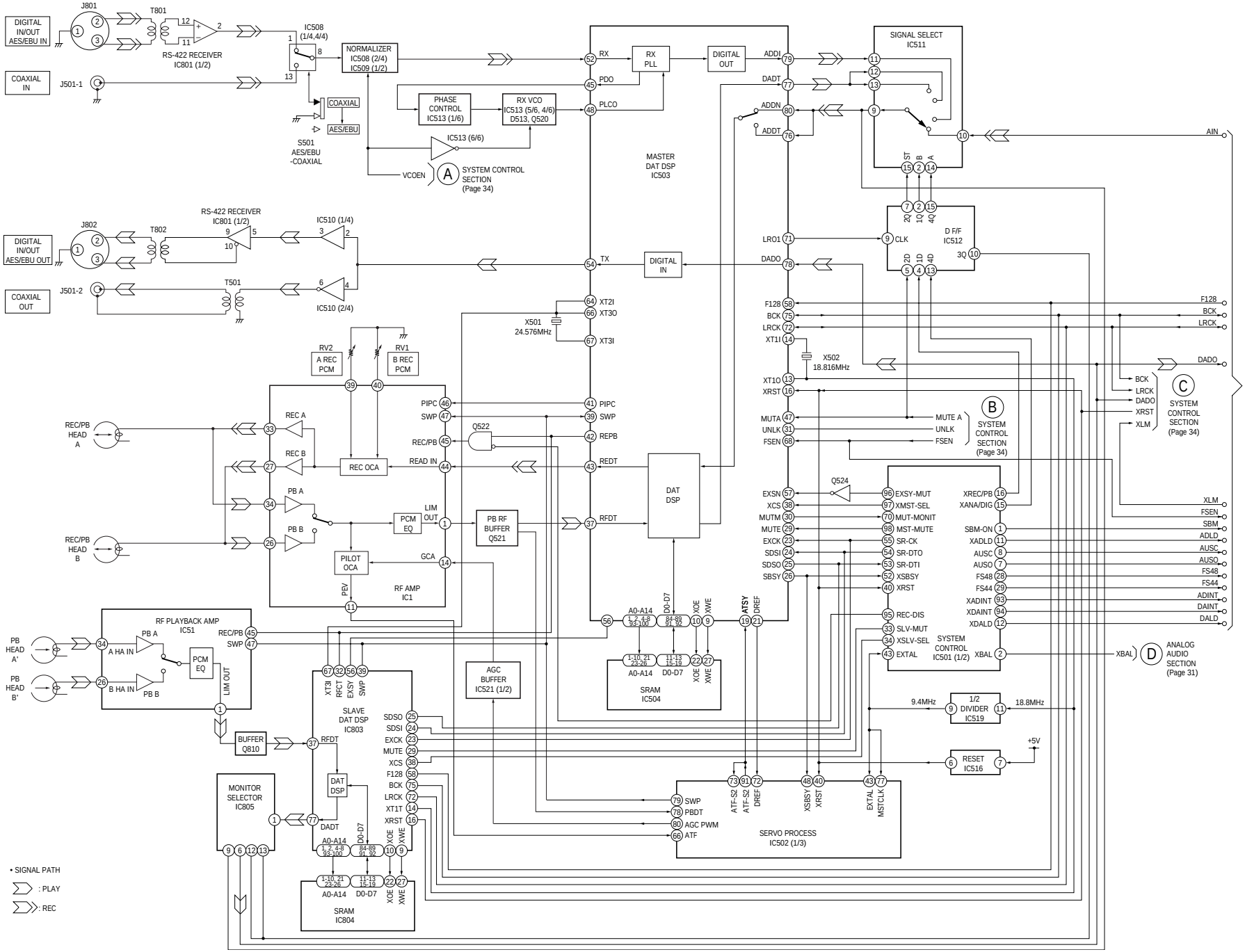


– DISPLAY SECTION –

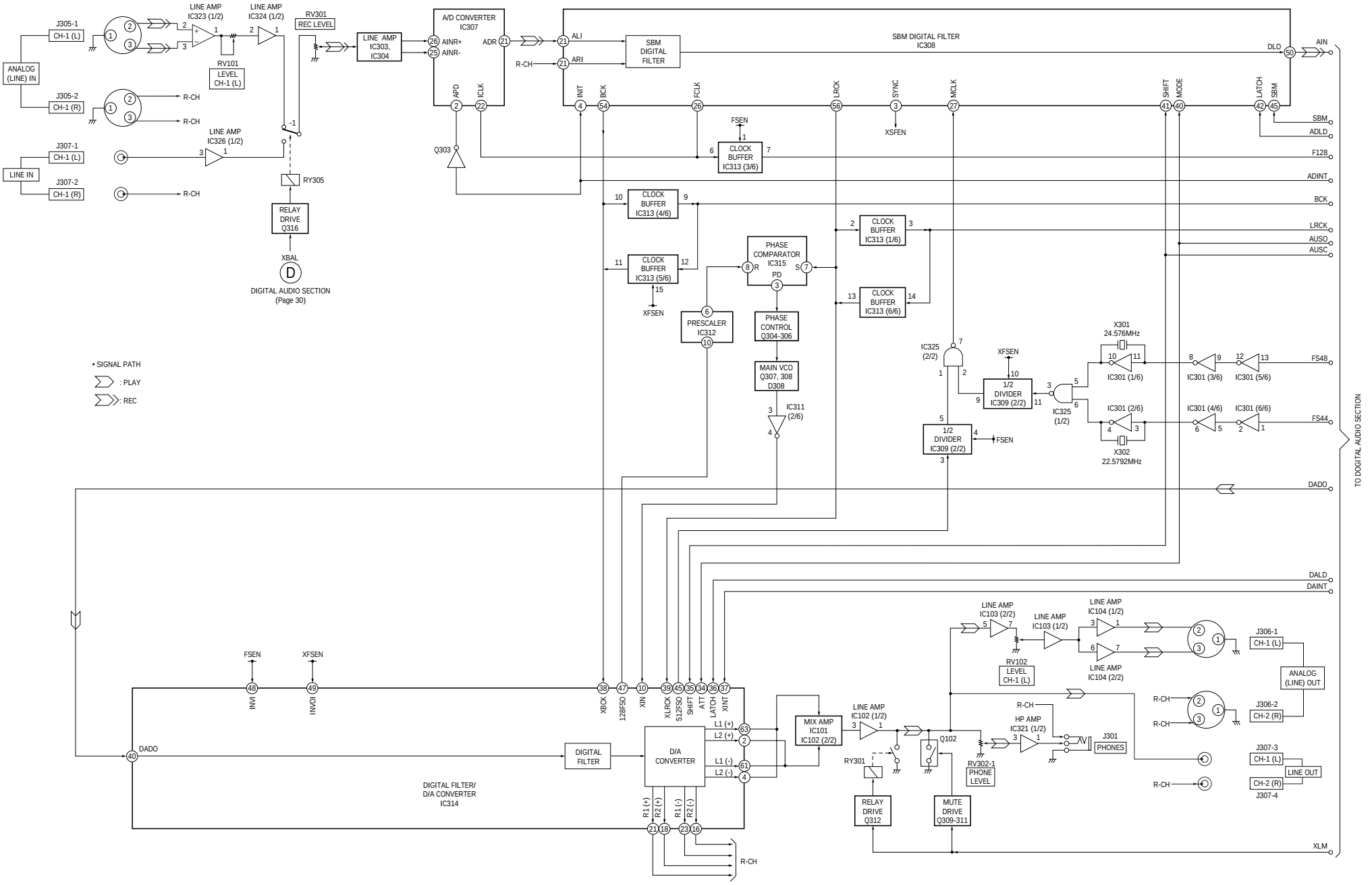
❻ IC701 ㉜ 4.19 MHz



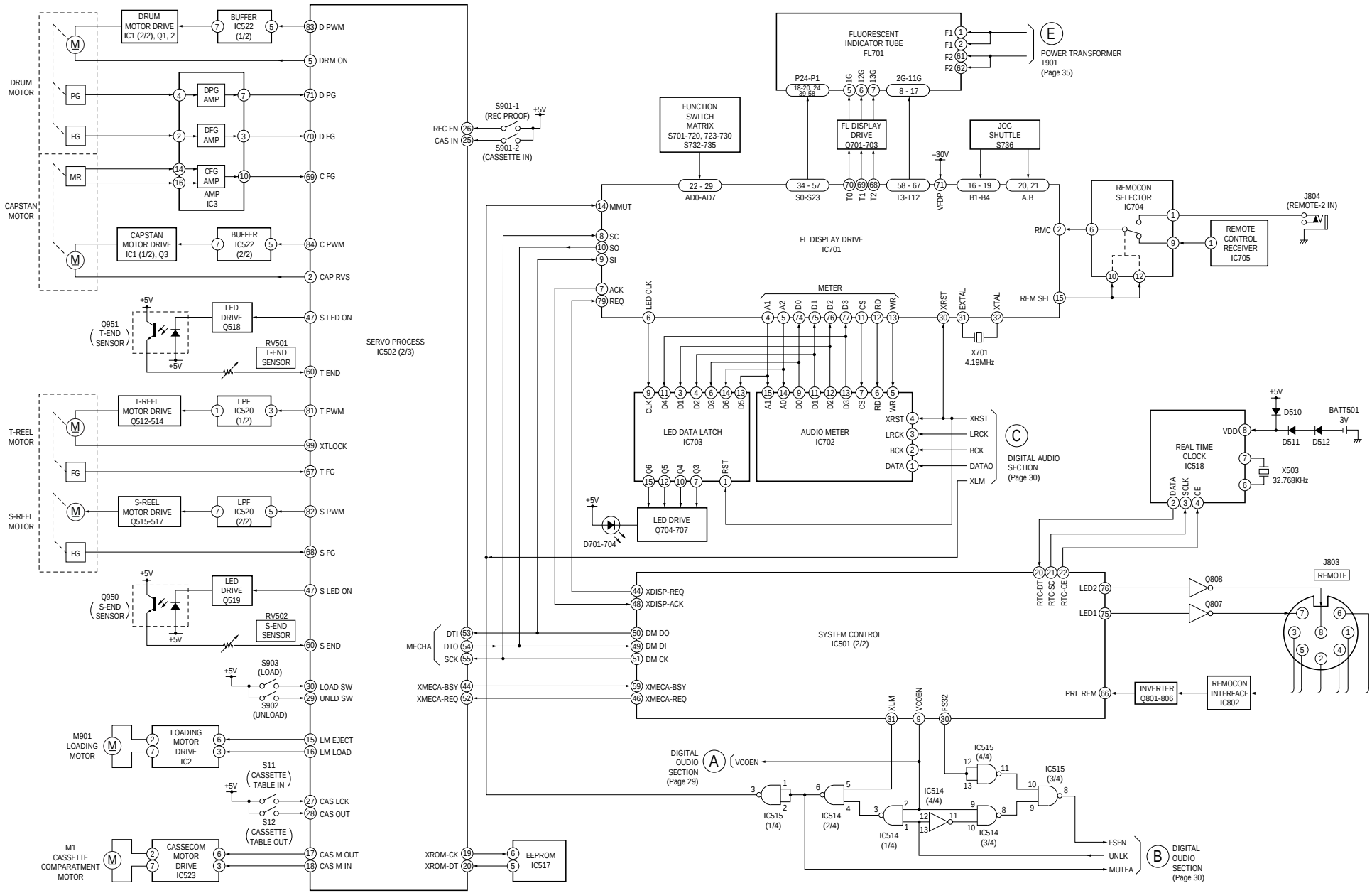
4-1. BLOCK DIAGRAMS – Digital Audio Section –



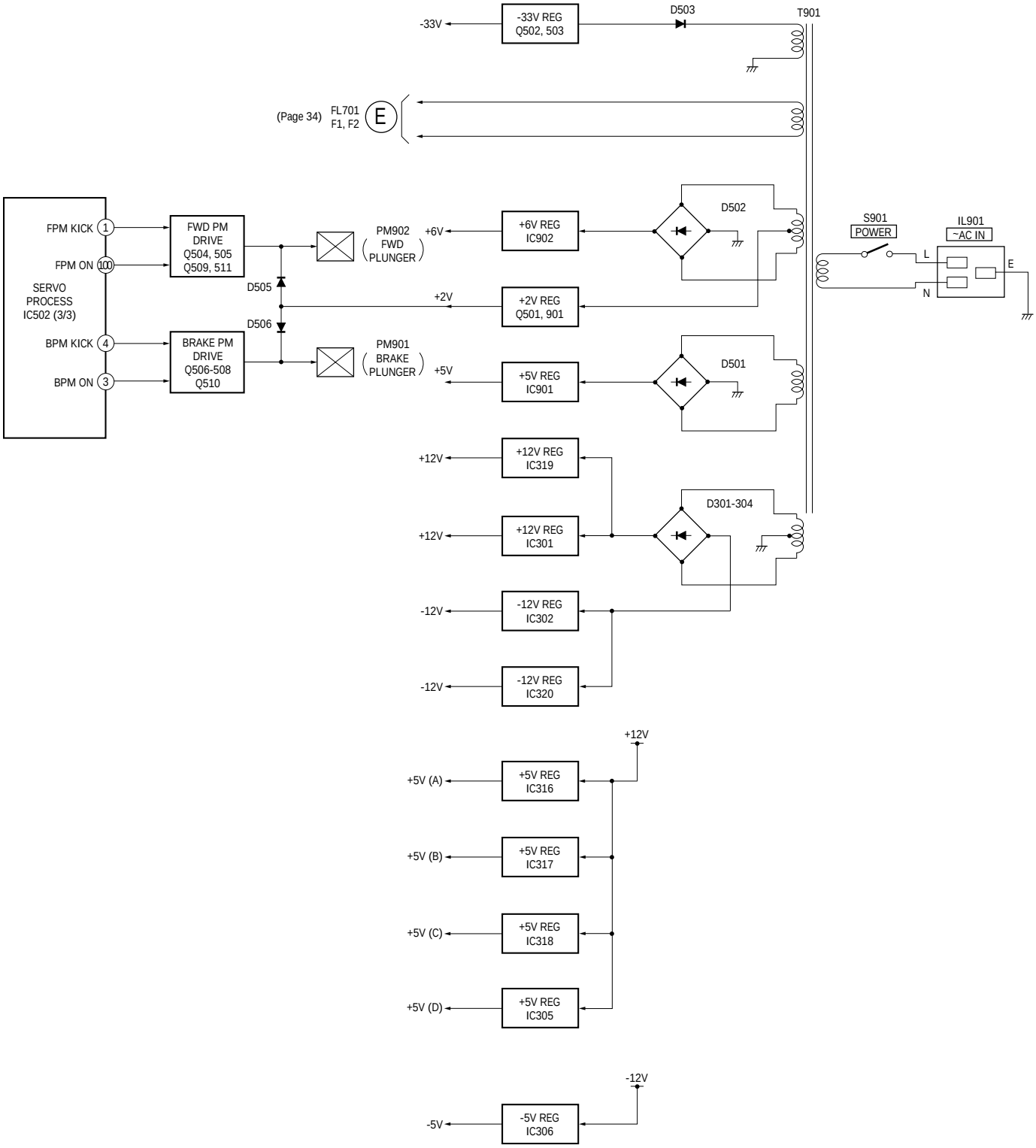
– Analog Audio Section –



– System Control Section –

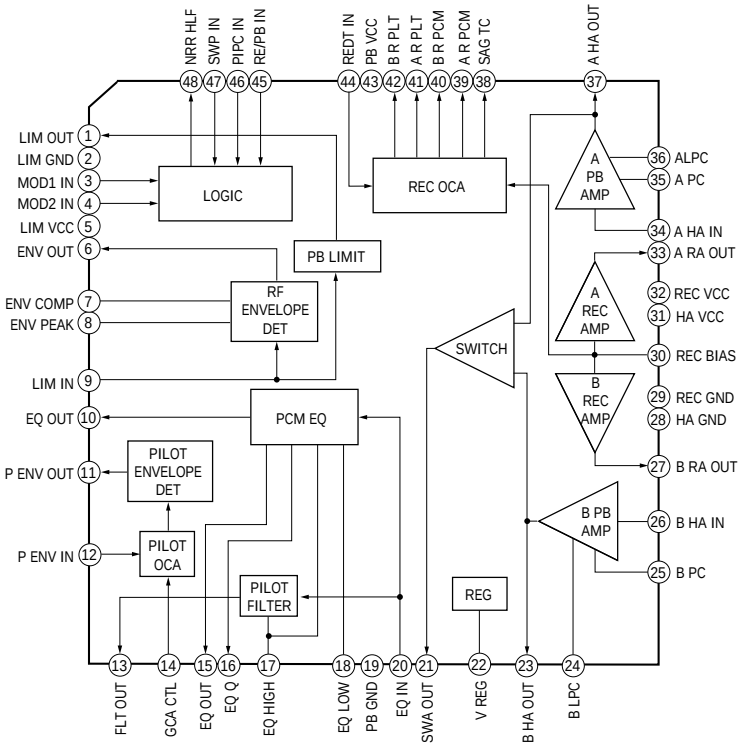


– Power Section –

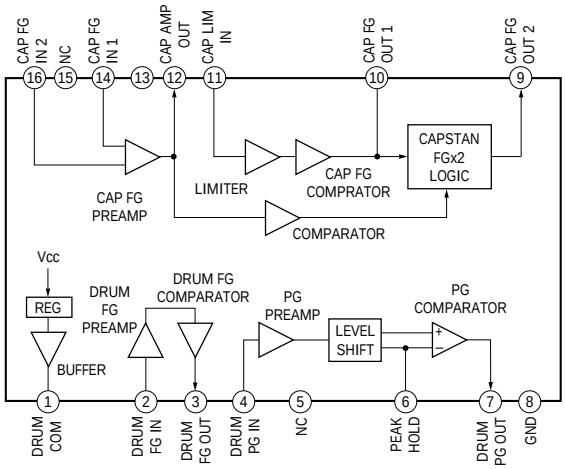


• **IC Block Diagrams**

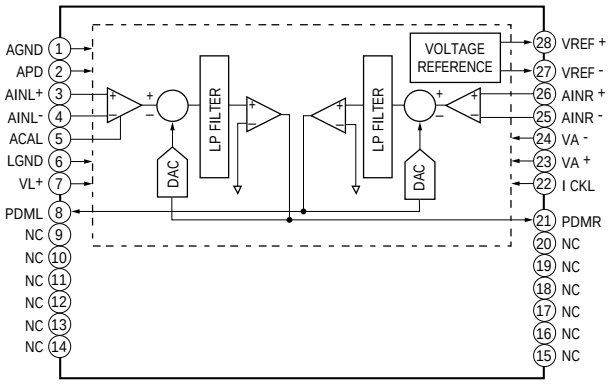
IC1 CXA1364R (RF AMP BOARD)
IC51 CXA1364R (AMPLIFIER BOARD)



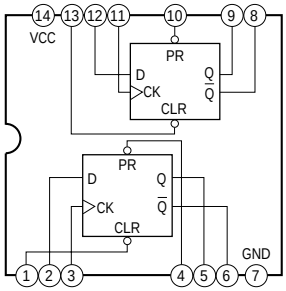
IC3 CX20115A (DRUM DRIVE BOARD)



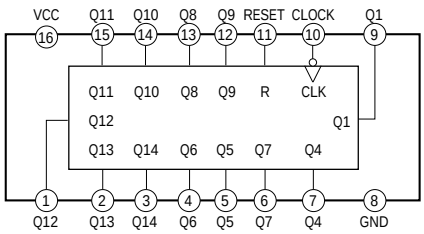
IC307 CXD8493M (AUDIO BOARD)



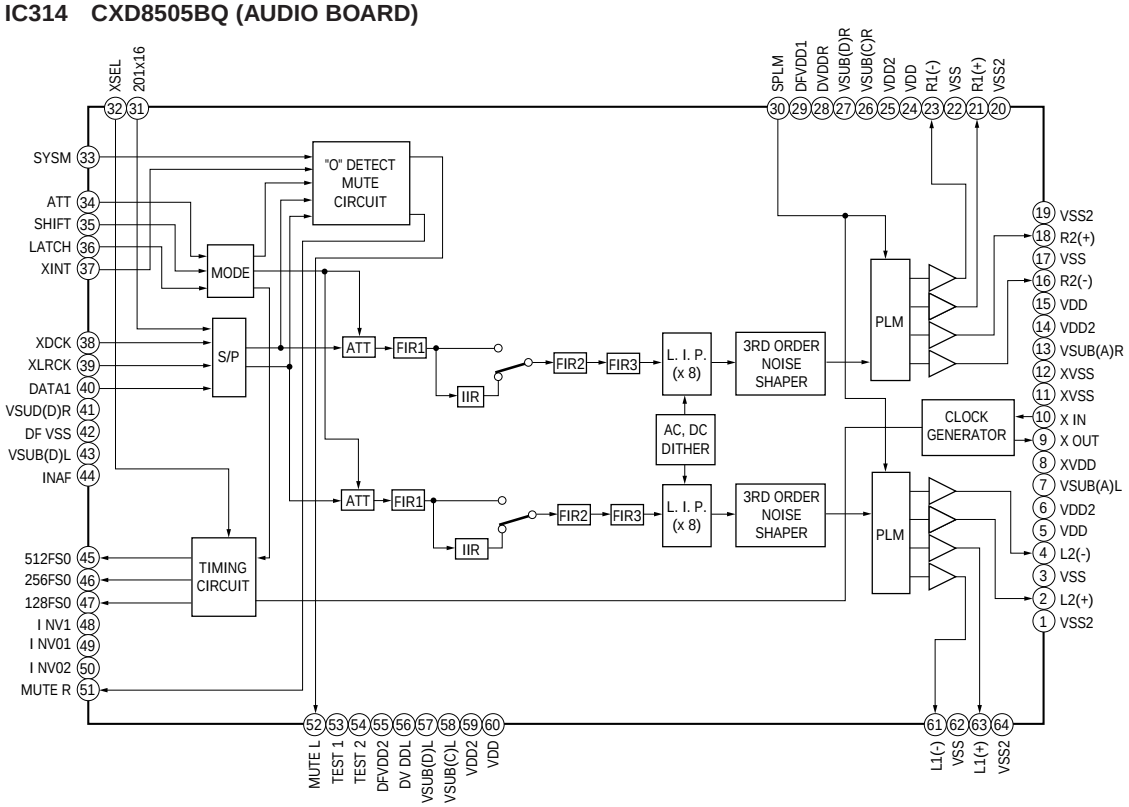
IC309 SN74HC74AN (AUDIO BOARD)



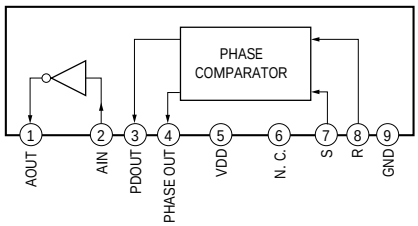
IC312 SN74HC4020ANS (AUDIO BOARD)



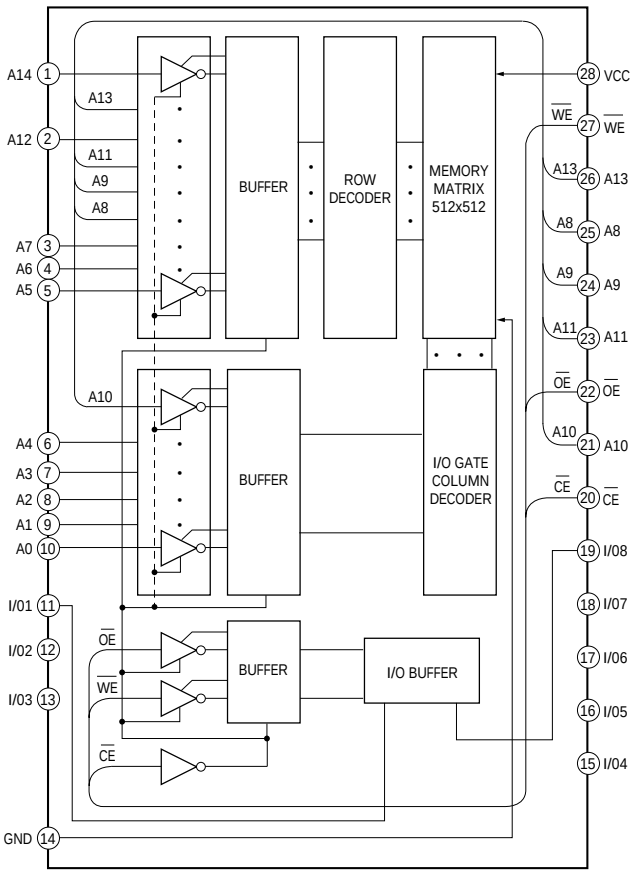
IC314 CXD8505BQ (AUDIO BOARD)



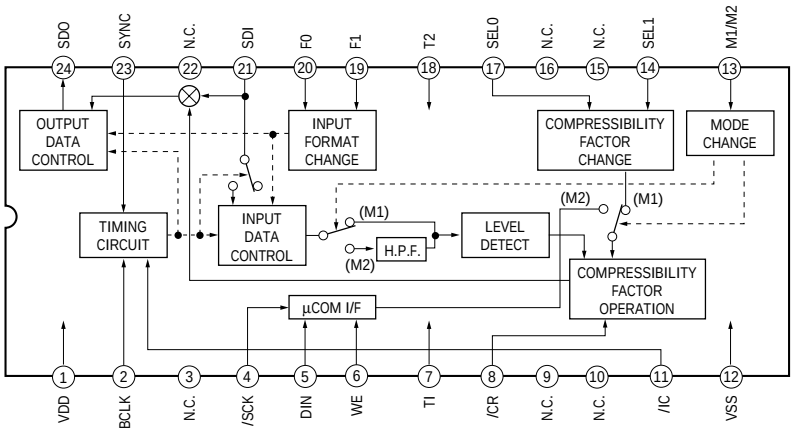
IC315 TC5081AP (AUDIO BOARD)



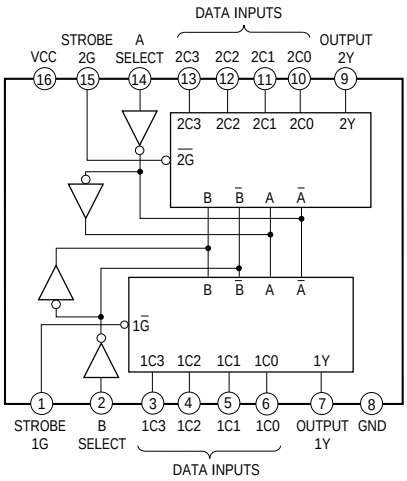
IC504 CXK58257BM (DIGITAL BOARD)
IC804 CXK58257BM (SP BOARD)



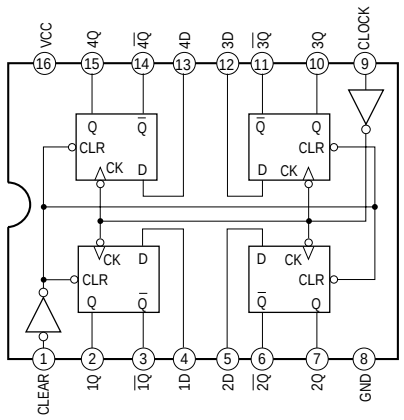
IC505 YM3412B-F (DIGITAL BOARD)



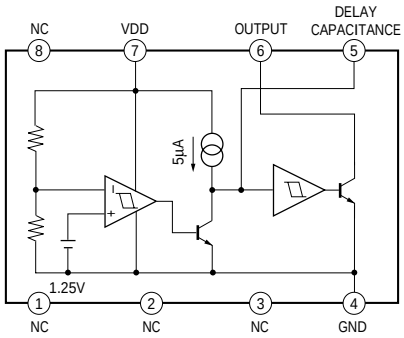
IC511 SN74HC153ANS (DIGITAL BOARD)



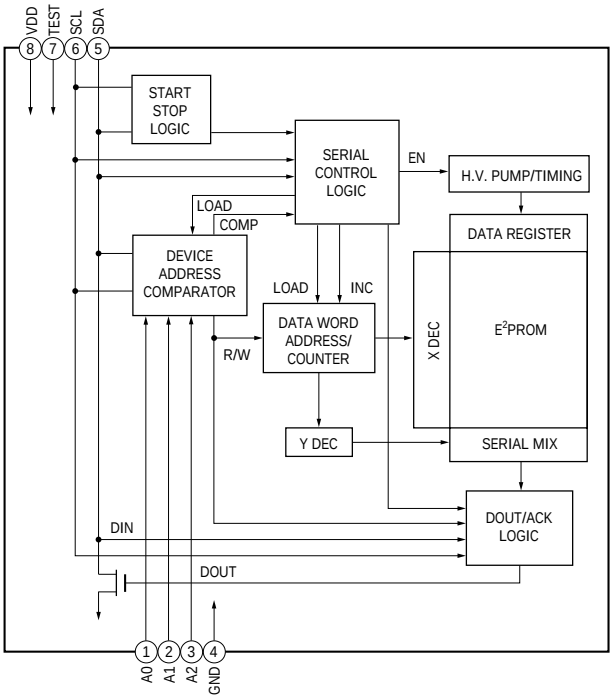
IC512 MC74HC175F (DIGITAL BOARD)



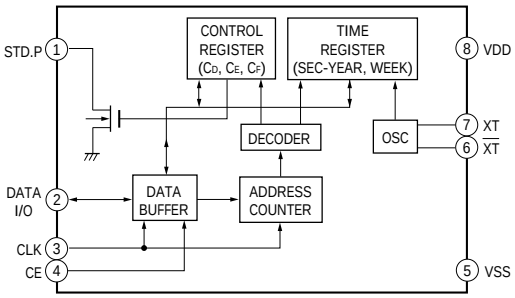
IC516 M51953BFP (DIGITAL BOARD)



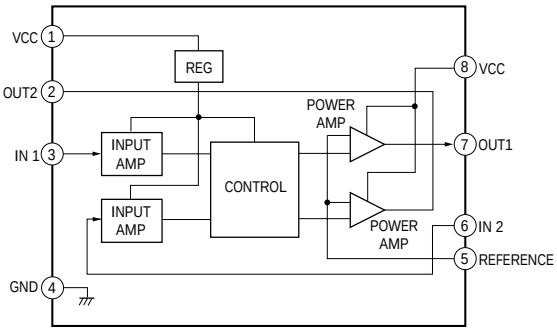
IC517 AT24C01A-10 SC (DIGITAL BOARD)



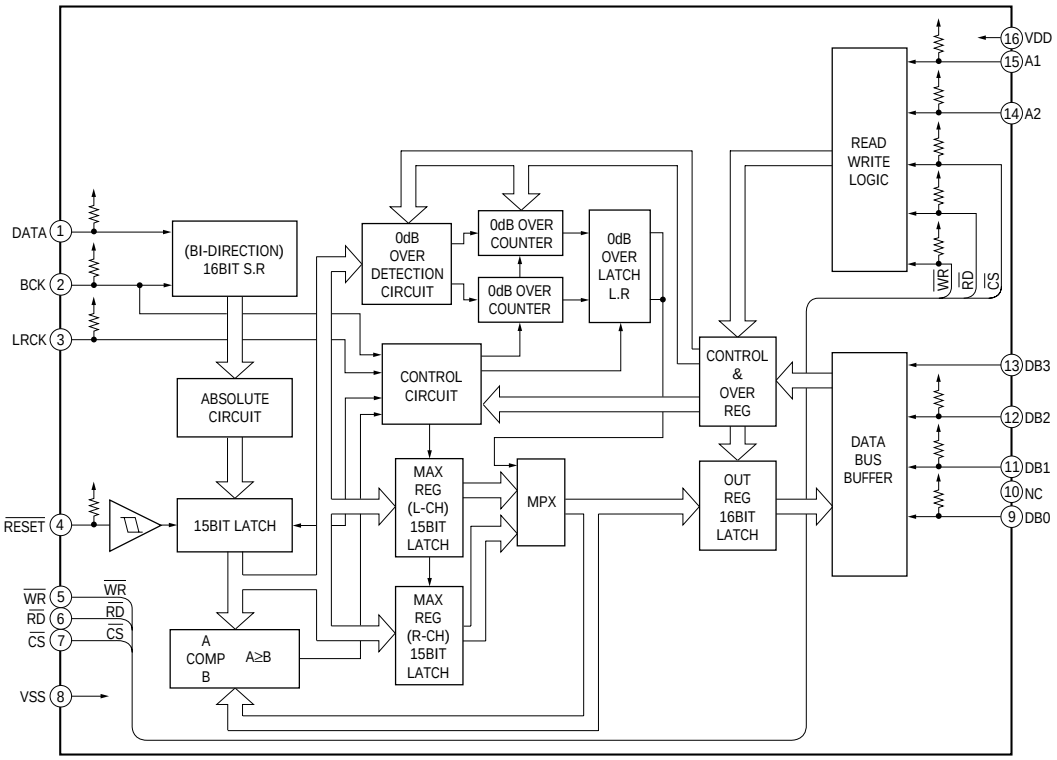
IC518 MSM6782-01-MS (DIGITAL BOARD)



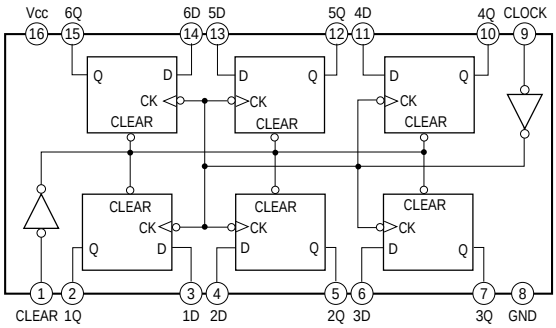
IC523 M54641L (DIGITAL BOARD)



IC702 MSM6338RS (DISPLAY BOARD)



IC703 SN74HC174AN (DISPLAY BOARD)


Vcc 6Q 6D 5D 5Q 4D 4Q CLOCK
16 15 14 13 12 11 10 9
Q D CK CLEAR
D Q CK CLEAR
D Q CK CLEAR
CLEAR CK Q D
CLEAR CK D Q
CLEAR CK D Q
1 2 3 4 5 6 7 8
CLEAR 1Q 1D 2D 2Q 3D 3Q GND

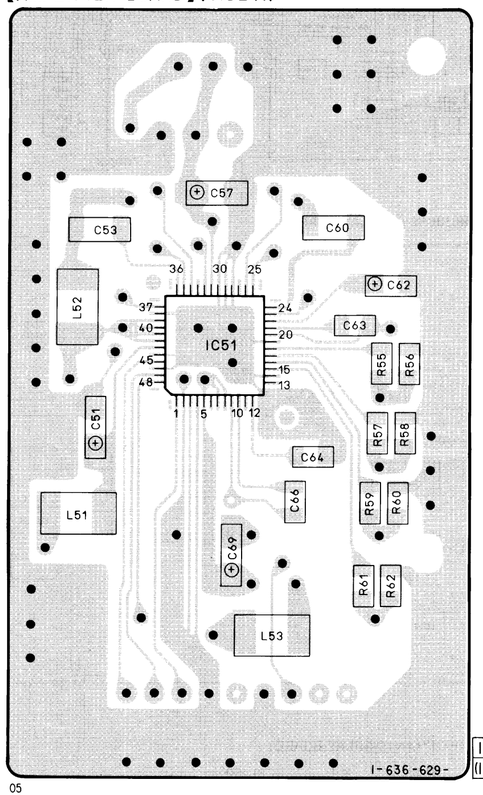
4-2. PRINTED WIRING BOARD – RF Section –

• See page 27 for Circuit Boards Location.

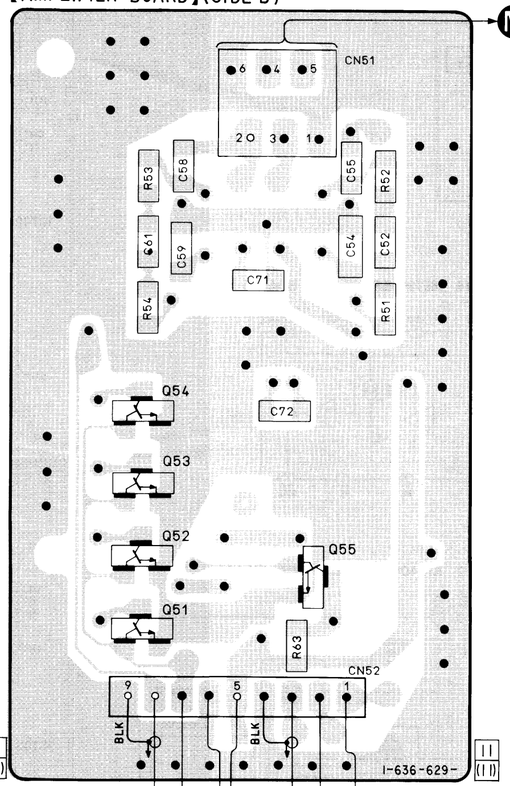
• **Semiconductor Location**

Ref. No.	Location
IC1	C-9
IC51	C-2
Q1	D-8
Q2	C-9
Q3	D-10
Q4	D-10
Q5	D-10
Q51	D-4
Q52	D-4
Q53	D-4
Q54	C-4
Q55	D-5

【AMPLIFIER BOARD】(SIDE A)



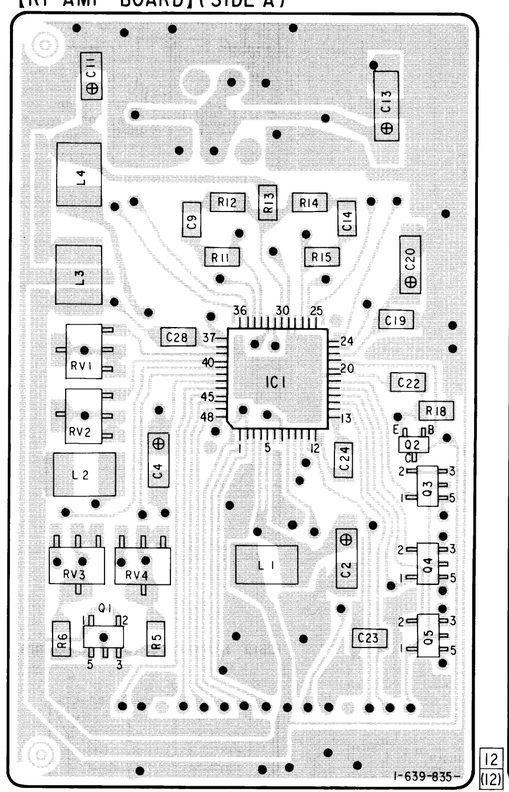
【AMPLIFIER BOARD】(SIDE B)



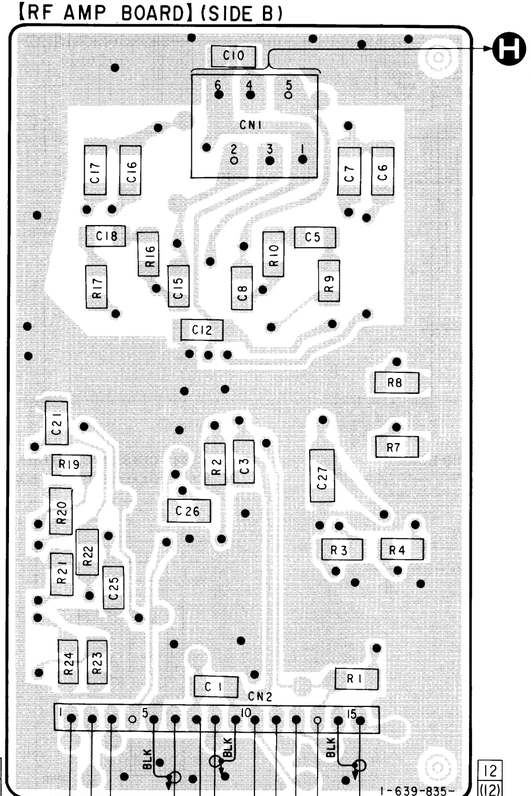
M M904(2/3) DRUM ASSY (Page 47)

L SP BOARD CN802 (Page 54)

【RF AMP BOARD】(SIDE A)



【RF AMP BOARD】(SIDE B)



H M904(1/3) DRUM ASSY (Page 47)

E DIGITAL BOARD CN506 (Page 56)

Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern from the side which enables seeing.

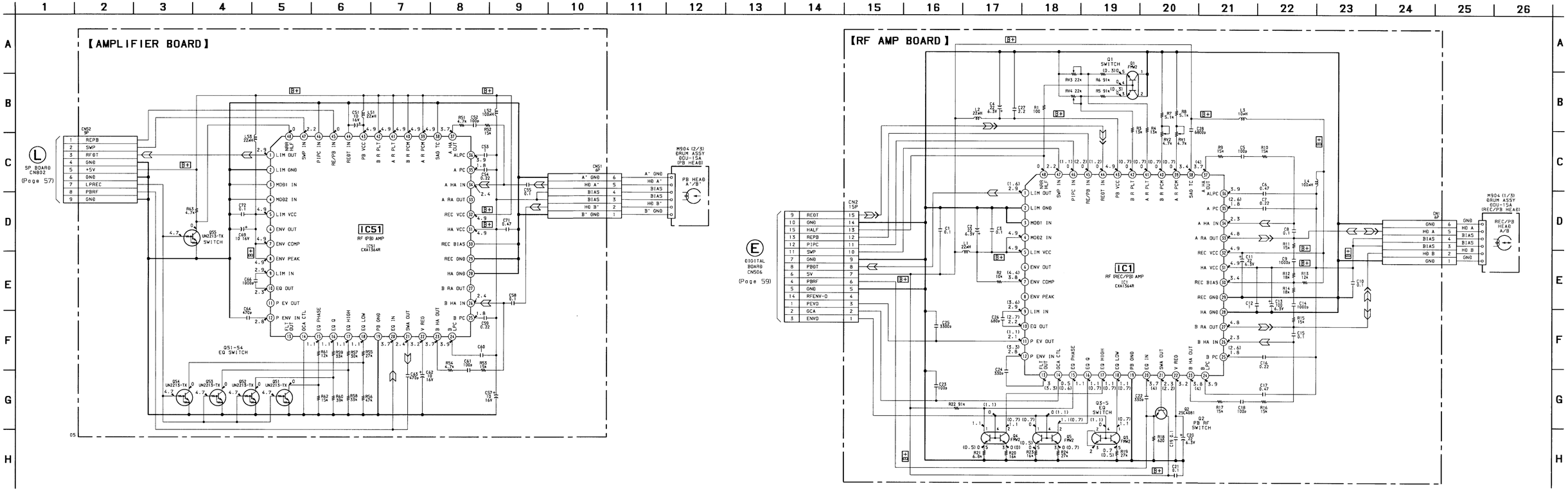
(The other layers' patterns are not indicated.)

Caution:

Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

4-3. SCHEMATIC DIAGRAM – RF Section –

• See page 36 for IC Block Diagrams.



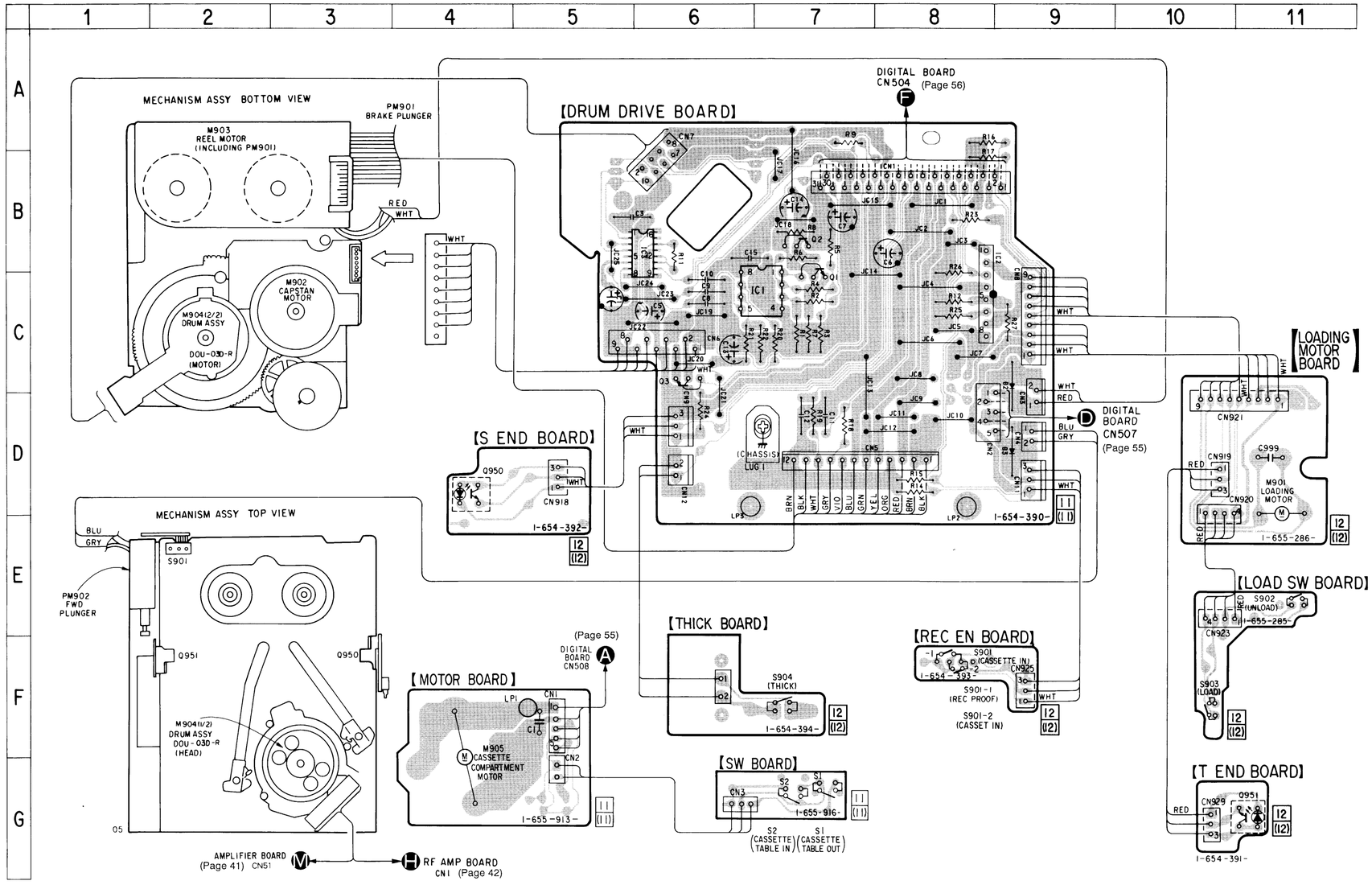
Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- B+ : B+ Line.
- Voltages are dc with respect to ground under no-signal conditions.
  no mark : PLAY
  ( ) : REC
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : PB
  : REC

4-4. PRINTED WIRING BOARDS – MD Section – • See page 27 for Circuit Boards Location.

• **Semiconductor Location**

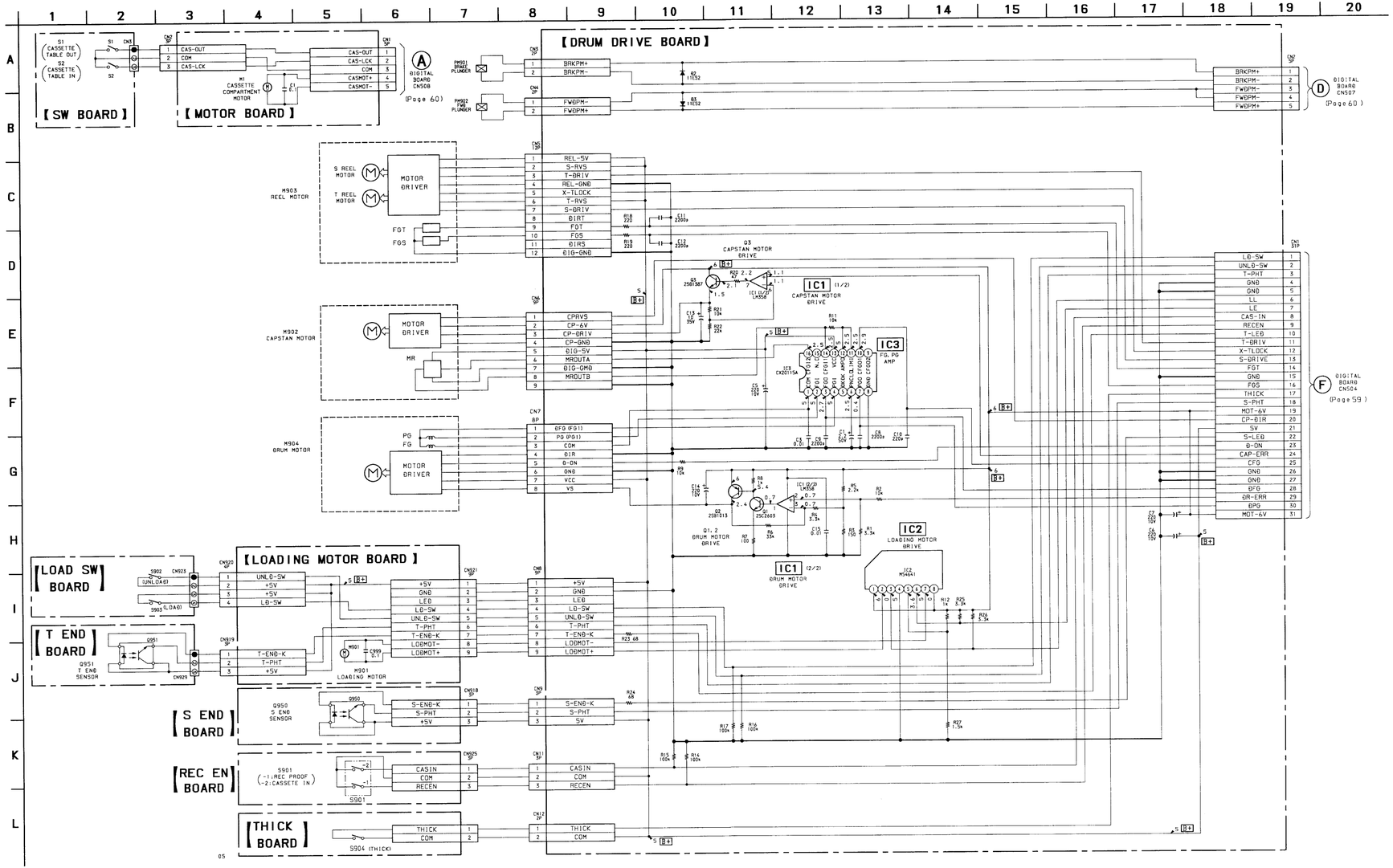
Ref. No.	Location
D2	C-9
D3	D-9
IC1	C-7
IC2	B-8
IC3	B-6
Q1	B-7
Q2	B-7
Q3	C-6
Q950	D-4
Q951	G-11



Note on Printed Wiring Board:
- ——o : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

4-5. SCHEMATIC DIAGRAM – MD Section –

• See page 36 for IC Block Diagrams.



Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- B+ : B+ Line.
- Voltages are dc with respect to ground under no-signal conditions.
  no mark : PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.

4-6. PRINTED WIRING BOARDS – DIGITAL Section –

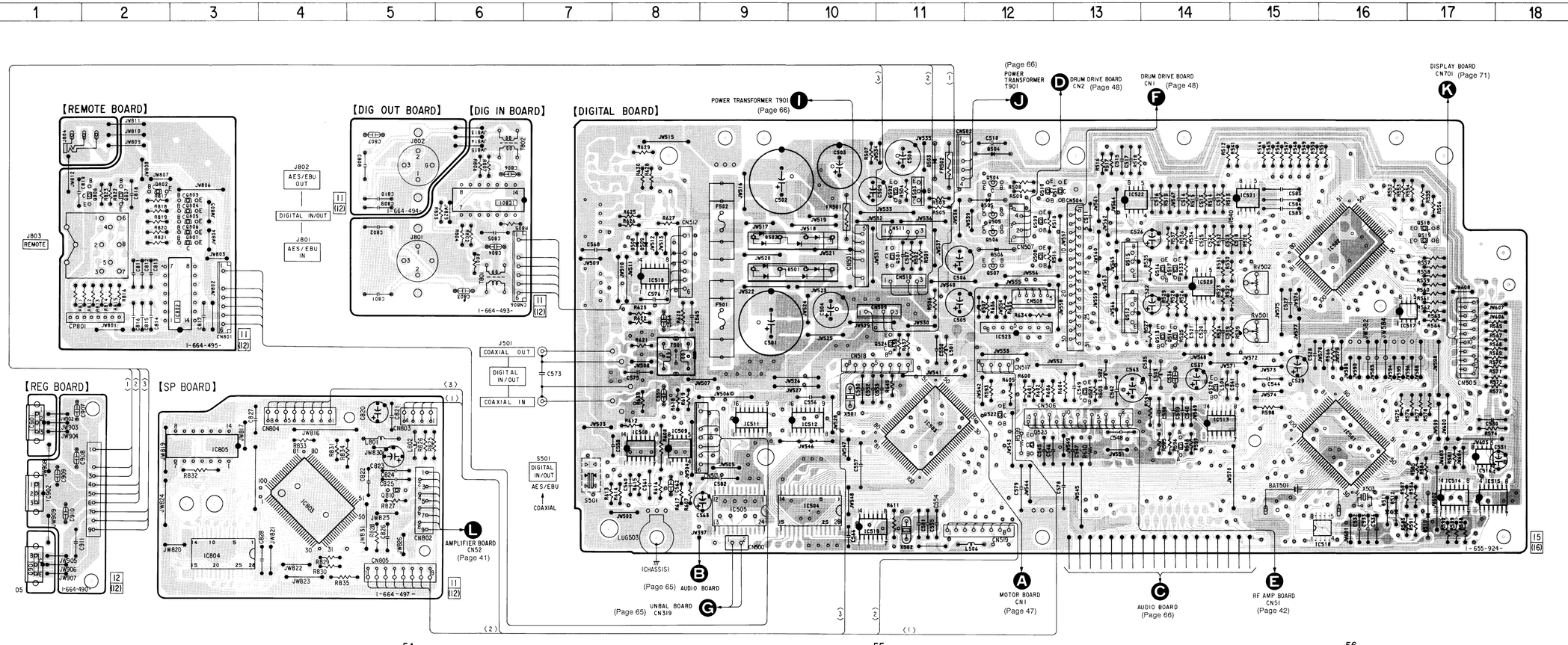
• See page 27 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D501	C-10	IC805	E-3
D502	C-10	IC901	E-1
D503	B-11	IC902	F-1
D504	B-12		
D505	C-12	Q501	C-11
D506	C-12	Q502	B-11
D507	D-12	Q503	B-11
D508	C-8	Q504	B-12
D509	C-8	Q505	C-12
D510	F-17	Q506	C-12
D511	F-16	Q507	C-12
D512	F-16	Q508	C-12
D513	E-14	Q509	C-12
		Q510	B-12
IC501	E-16	Q511	B-13
IC502	C-16	Q512	D-13
IC503	E-11	Q513	D-14
IC504	F-10	Q514	D-14
IC505	F-9	Q515	C-13
IC508	E-8	Q516	C-14
IC509	E-8	Q517	C-14
IC510	C-8	Q518	C-17
IC511	E-9	Q519	C-17
IC512	E-10	Q520	E-14
IC513	E-14	Q521	E-13
IC514	F-17	Q522	E-12
IC515	F-17	Q523	E-12
IC516	E-17	Q524	D-11
IC517	D-17	Q801	C-3
IC518	F-16	Q802	B-2
IC519	F-10	Q803	C-3
IC520	C-14	Q804	C-3
IC521	B-15	Q805	C-3
IC522	B-13	Q806	C-3
IC523	D-12	Q807	B-2
IC801	C-6	Q808	B-2
IC802	D-3	Q810	F-5
IC803	F-4	Q901	G-1
IC804	G-3		

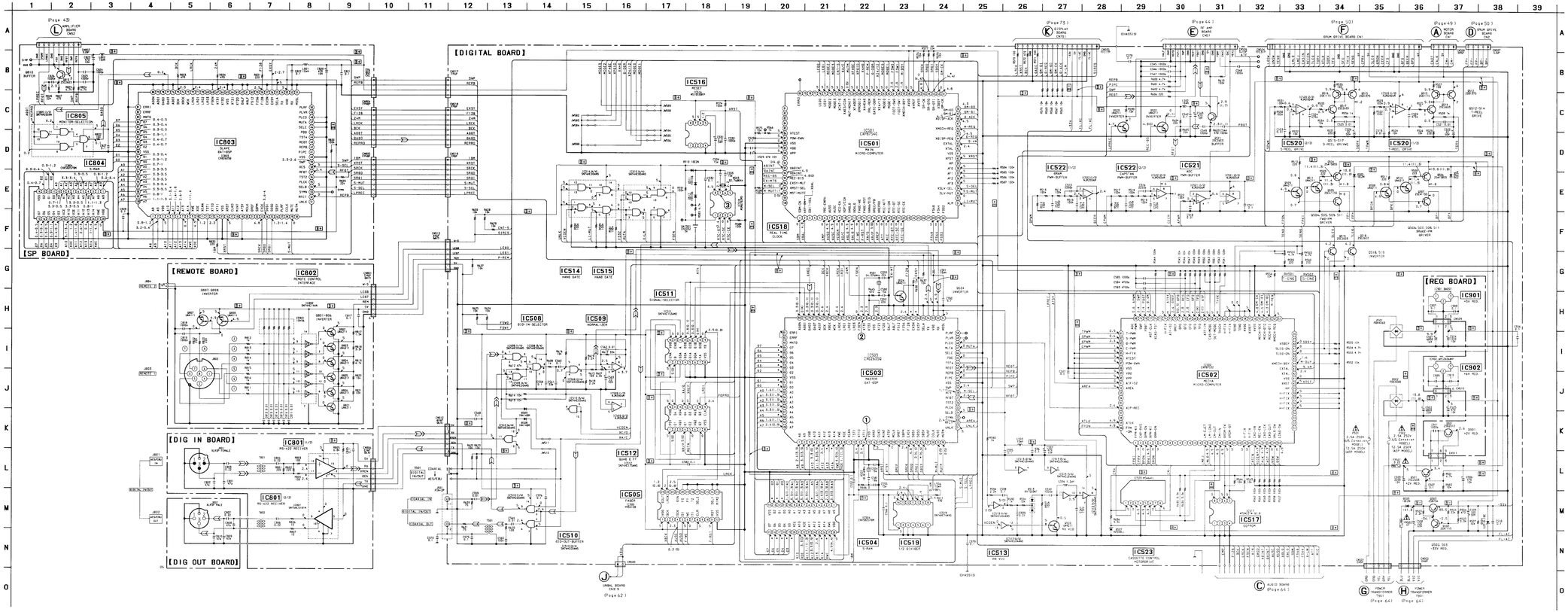
Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.
- ○ : Through hole.
- ▨ : Pattern from the side which enables seeing.



4-7. SCHEMATIC DIAGRAM – DIGITAL Section –

• See page 28 for Waveforms. • See page 37 to 39 for IC Block Diagrams.



Note on Schematic Diagram:

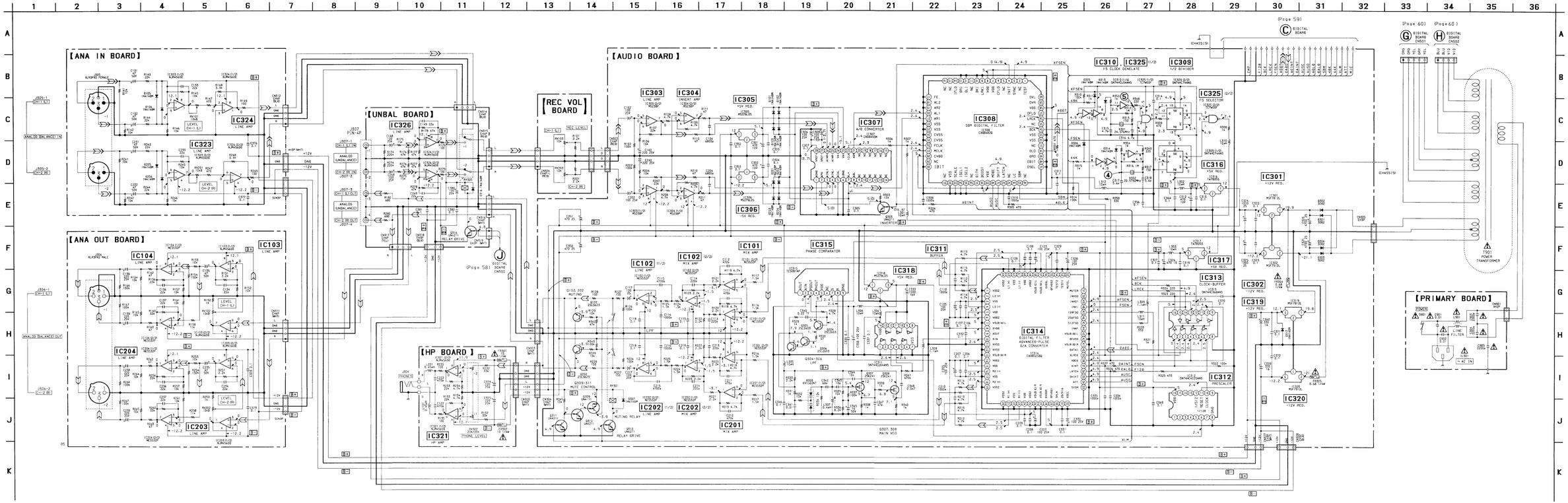
- All capacitors are in µF unless otherwise noted. pF: µµF
  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- : fusible resistor.
- : panel designation.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

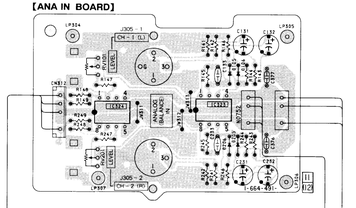
- B+ : B+ Line.
- B− : B− Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
  ( ) : REC
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : PB
  : REC

4-8. SCHEMATIC DIAGRAM – AUDIO Section –

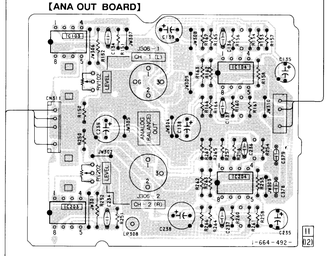
• See page 28 for Waveforms. • See page 36, 37 for IC Block Diagrams.


【ANA IN BOARD】
【ANA OUT BOARD】
【UNBAL BOARD】
【REC VOL BOARD】
【AUDIO BOARD】
【HP BOARD】
【PRIMARY BOARD】
IC324
LINE AMP
IC323
LINE AMP
IC326
LINE AMP
IC104
LINE AMP
IC103
LINE AMP
IC204
LINE AMP
IC203
LINE AMP
IC303
LINE AMP
IC304
INVERT AMP
IC305
+5V REG.
IC307
A/D CONVERTER
IC306
-5V REG.
IC308
SDIF DIGITAL FILTER
IC310
FS CLOCK GENERATE
IC309
1/2 DIVIDER
IC325
FS SELECTOR
IC316
+5V REG.
IC301
+12V REG.
IC317
+5V REG.
IC313
CLOCK-BUFFER
IC302
-12V REG.
IC319
+12V REG.
IC312
PRESCALER
IC320
-12V REG.
IC102
MIX AMP
IC101
MIX AMP
IC202
MIX AMP
IC201
MIX AMP
IC315
PHASE COMPARATOR
IC318
+5V REG.
IC311
BUFFER
IC314
DIGITAL FILTER ADVANCED-PLISE D/A CONVERTER
IC321
OP AMP
Q304-306
LPF
Q309-311
MUTE CONTROL
Q312
MUTING RELAY
Q313
RELAY DRIVE
Q307, 308
MAIN VCO
Q314
INVERTER
(Page 58) DIGITAL BOARD CN550
(Page 59) DIGITAL BOARD CN501
(Page 60) DIGITAL BOARD CN502
T901
POWER TRANSFORMER
ANALOG (BALANCED) IN
ANALOG (BALANCED) OUT
PHONES
J826-1 (CH-1 (L))
J826-2 (CH-2 (R))
J824-1 (CH-1 (L))
J824-2 (CH-2 (R))
J827-1 (CH-1 (L) IN)
J827-2 (CH-2 (R) IN)
J827-3 (CH-1 (L) OUT)
J827-4 (CH-2 (R) OUT)
J826 (ANALOG (BALANCED))
J824 (ANALOG (BALANCED))
J827 PIN-4P
J824
J826
J828
J829
J830
J831
J832
J833
J834
J835
J836
J837
J838
J839
J840
J841
J842
J843
J844
J845
J846
J847
J848
J849
J850
J851
J852
J853
J854
J855
J856
J857
J858
J859
J860
J861
J862
J863
J864
J865
J866
J867

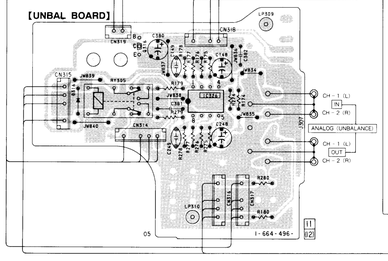
【ANA IN BOARD】



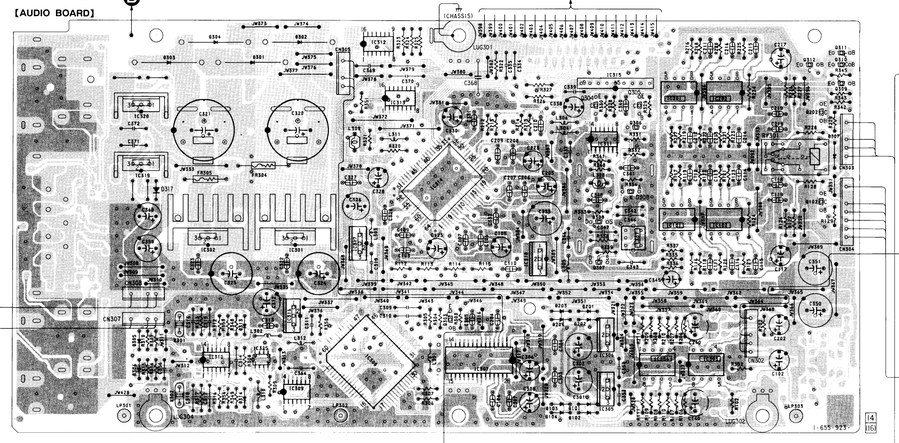
【ANA OUT BOARD】



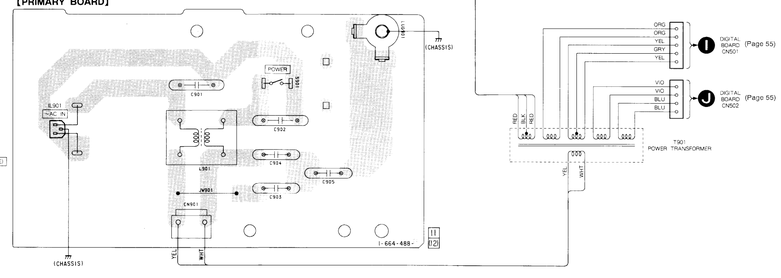
【UNBAL BOARD】



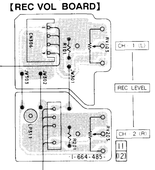
【AUDIO BOARD】



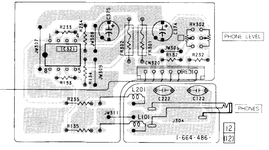
【PRIMARY BOARD】



【REC VOL BOARD】



【HP BOARD】



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	F-12	IC305	F-12
D102	F-12	IC306	E-12
D103	F-12	IC307	E-11
D104	F-12	IC308	E-10
D105	B-3	IC309	F-9
D106	B-4	IC310	E-8
D201	E-12	IC311	C-12
D202	E-12	IC312	A-10
D203	E-12	IC313	B-10
D204	E-12	IC314	C-10
D205	C-4	IC315	B-12
D206	C-3	IC316	E-9
D301	B-8	IC317	D-9
D302	A-9	IC318	D-12
D303	B-7	IC319	C-7
D304	A-8	IC320	B-7
D305	E-7	IC321	E-17
D306	E-7	IC323	B-3
D307	C-15	IC324	B-2
D308	C-13	IC325	E-8
D313	E-8	IC326	H-3
D314	F-8		
D317	C-7	Q102	C-15
		Q202	B-15
IC101	D-13	Q303	E-11
IC102	D-14	Q304	B-12
IC103	D-2	Q305	B-13
IC104	D-4	Q306	B-13
IC201	B-13	Q307	D-12
IC202	B-14	Q308	D-12
IC203	F-2	Q309	B-15
IC204	F-4	Q310	B-15
IC301	D-9	Q311	B-15
IC302	D-8	Q312	B-15
IC303	E-14	Q316	H-2
IC304	E-13		

Note on Printed Wiring Board:

- ⟷ : parts extracted from the component side.
- ○ : Through hole.
- ▒ : Pattern from the side which enables seeing.

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF
  50 WV or less are not indicated except for electrolytics and tantaliums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ⏦ : fusible resistor.
- ▭ : panel designation.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line.
- B− : B− Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
  ( ) : REC
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▷ : PB
  ▷▷ : REC

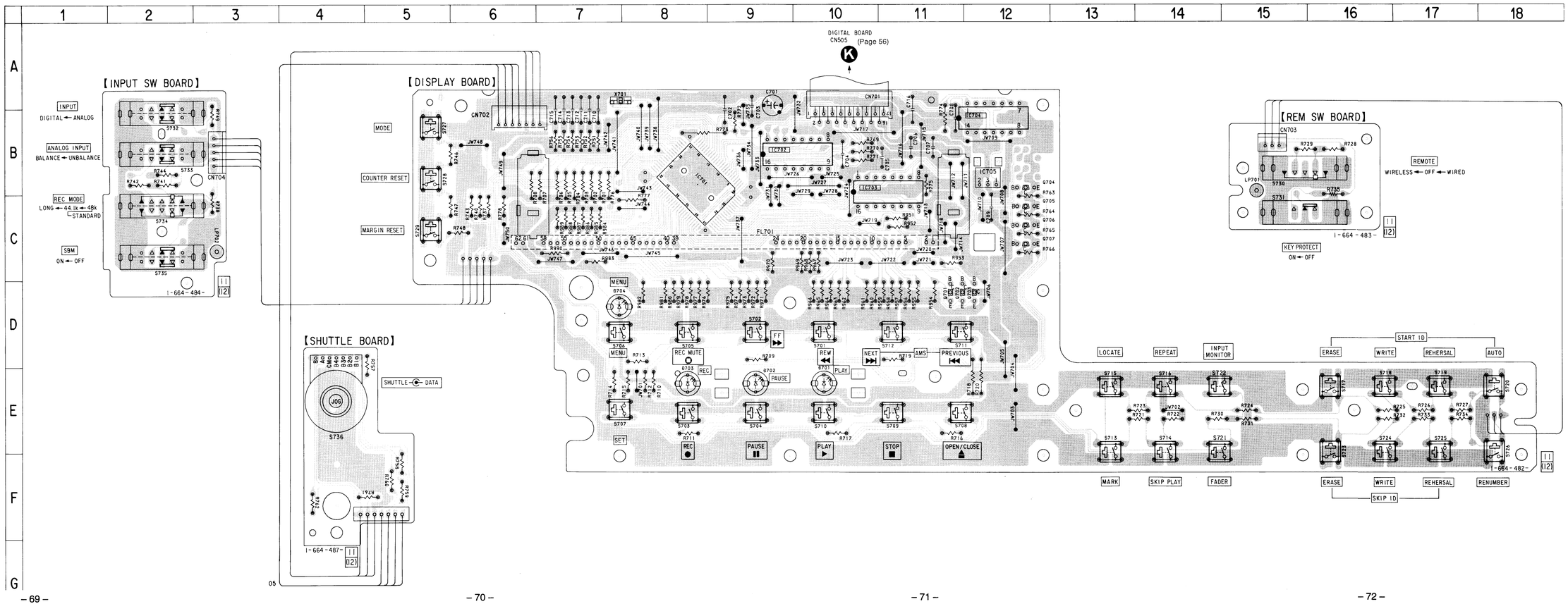
4-10. PRINTED WIRING BOARDS – DISPLAY Section –

• See page 27 for Circuit Boards Location.

• **Semiconductor Location**

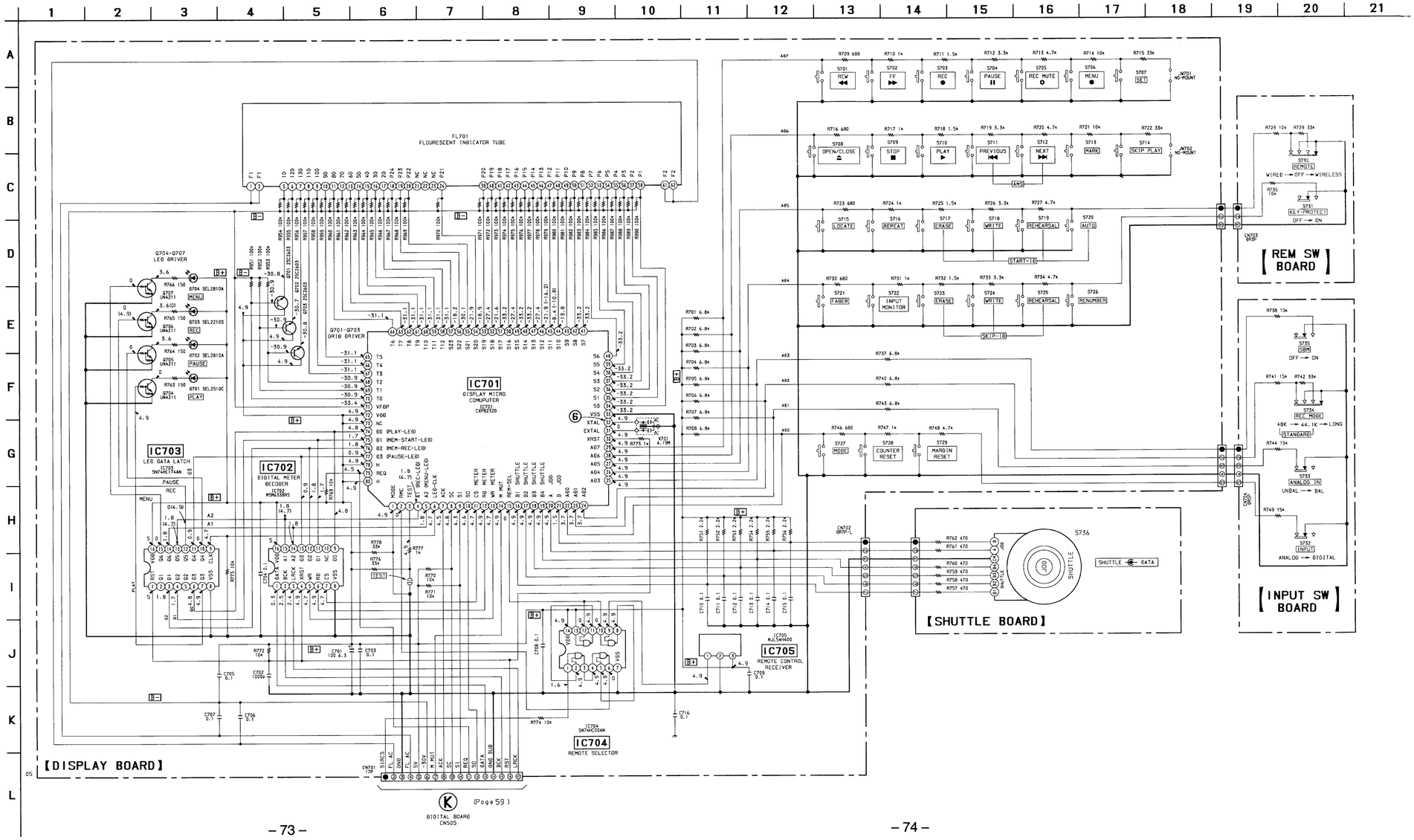
Ref. No.	Location
D701	E-10
D702	E-9
D703	E-8
D704	D-7
IC701	B-8
IC702	B-9
IC703	B-10
Q701	D-11
Q702	D-11
Q703	D-12
Q704	B-12
Q705	C-12
Q706	C-12
Q707	C-12

Note on Printed Wiring Board:
- ⟷ : parts extracted from the component side.
- ▒▒ : Pattern from the side which enables seeing.



4-11. SCHEMATIC DIAGRAM – DISPLAY Section –

• See page 28 for Waveforms. • See page 39 for IC Block Diagrams.



Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF
  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
  ( ) : REC
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

4-12. IC PIN FUNCTION DESCRIPTION

• AUDIO BOARD IC308 CXD8482Q (SBM + DIGITAL FILTER)

Pin No.	Pin Name	I/O	Function
1	TEST	I	Test input pin. “H” for test mode and “L” for normal mode. (Fixed at “L” level in this set.)
2	NC	—	Empty pin
3	SYNC	I	Sync mode setting pin. “H” for INT master mode and “L” for EXT slave mode.
4	INIT	I	A/D converter power down mode input from main microcomputer (IC501). (“H” active) (This IC is set OFF in digital input/output mode.)
5	NC	—	Empty pin
6	CFLG	O	FE calibration flag output (Not used in this set, empty pin.)
7, 8	VDD	—	Power supply pin (+5V)
9	LRKI	I	L/R clock input (Not used in this set, fixed at “L” level.)
10	BKI	I	Beat clock input (Not used in this set, fixed at “L” level.)
11	NC	—	Empty pin
12	DLI	I	L channel data input (Not used in this set, fixed at “L” level.)
13	DRI	I	R channel data input (Not used in this set, fixed at “L” level.)
14	IFLG	O	FE sync flag output (Not used in this set, empty pin.)
15, 16	NC	—	Empty pin
17	FE	I	FE select input (Not used in this set, fixed at “L” level.)
18	AL2	I	Data signal (L) input (Not used in this set, fixed at “L” level.)
19	AR2	I	Data signal (R) input (Not used in this set, fixed at “L” level.)
20	AL1	I	Data signal (L) input from A/D converter (IC307).
21	AR1	I	Data signal (R) input from A/D converter (IC307).
22, 23	VSS	—	Ground
24, 25	CVSS	—	Ground
26	FCLK	O	Output of 128fs master clock for FE to A/D converter (IC307).
27	MCLK	I	Input of 256fs master clock from FS clock generator (IC325).
28	CVDD	—	Power supply pin (+5V)
29	NC	—	Empty pin
30	IBIT	I	64fs input data mode select input (“H”: 4bit, “L”: 1bit) (Fixed at “L” level in this set.)
31	NC	—	Empty pin
32	VSS	—	Ground
33	SCALE	I	Scale select input (“H”: ×4, “L”: ×5) (Fixed at “L” level in this set.)
34	ISEL1	I	FS select of input data (Fixed at “L” level in this set.)
35	ISEL2	I	FS select of input data (Fixed at “L” level in this set.)
36	NC	—	Empty pin
37	DITH	I	Dither control input. Dither active when “H” and stopped when “L”. (Not used in this set, empty pin.)
38	BOOST	I	Boost control input. Boost active when “H” and normal when “L”. (Fixed at “H” level in this set.)
39	VDD	—	Power supply pin (+5V)
40	MODE	I	Serial data signal input from main microcomputer (IC501).
41	SHIFT	I	Shift clock signal input from main microcomputer (IC501). (Shift when ↓, latch when ↑)
42	LATCH	I	Latch pulse signal input from main microcomputer (IC501).
43	NC	—	Empty pin
44	LC	I	Low cut control input. “H” for low frequency cut and “L” for flat. (Fixed at “H” level in this set.)
45	SBM	I	Super Bit Mapping (SBM) control input from main microcomputer (IC501). (“H”: ON, “L”: OFF)

Pin No.	Pin Name	I/O	Function
46	NC	—	Empty pin
47	OSEL	I	FS select of data output. (“H”: 2FS output or EX mode, “L”: FS output) (Fixed at “L” level in this set.)
48	OBIT	I	Bit select of data output. (“H”: 24 bits, “L”: 16 bits) (Fixed at “L” level in this set.)
49	DRO	O	Write clock output (Not used in this set, empty pin.)
50	DLO	O	L/R channel data signal output
51	NC	—	Empty pin
52, 53	VSS	—	Ground
54	BCK	I	Bit clock input from digital filter (IC314).
55	NC	—	Empty pin
56	LRCK	I	L/R clock input from digital filter (IC314).
57	OFLG	O	Outside sync flag output (Not used in this set, empty pin.)
58	VDD	—	Power supply pin (+5V)
59	OVR	O	R channel side overflow flag output (Not used in this set, empty pin.)
60	OVL	O	L channel side overflow flag output (Not used in this set, empty pin.)

• **DIGITAL BOARD IC501 CXP87540-037Q (MAIN MICROCOMPUTER)**

Pin No.	Pin Name	I/O	Function
1	SBM-ON	O	SBM (Super Bit Mapping) ON/OFF select pin (“L”: OFF, “H”: ON)
2	XBAL	O	Analog input select (“L”: BAL, “H”: UNBAL)
3	OBIT-SEL	O	Not used.
4, 5	—	—	Empty pin
6	PRE-EMPH	O	Not used in this set.
7	AUSO	O	Digital filter control serial data output pin
8	AUSC	O	Digital filter control serial clock output pin
9	VCO-EN	O	DIGITAL IN REC mode only for “H” output.
10	XOPT/COA	O	Select (“L”: COAXIAL, “H”: OPTICAL)
11	XADLD	O	A/D digital filter control latch output pin
12	XDALD	O	D/A digital filter control latch output pin
13	FADE-WE	O	FADER IC write enabling signal output
14	FADE-RST	O	FADER IC reset signal output
15	XANA/DIG	O	ANALOG/DIGITAL IN select output pin (“L”: ANALOG IN, “H”: DIGITAL IN)
16	XREC/PB	O	Record/playback select output pin (“L”: REC, “H”: PB)
17	XREPRO	O	Not used in this set.
18	MIC-ATT	O	Not used in this set.
19	MIC-ON	O	Not used in this set.
20	RTC-DT	I/O	Clock IC serial data input/output pin
21	RTC-SC	O	Clock IC serial data output pin
22	RTC-CE	O	Clock IC chip enable output pin
23 — 27	—	—	Empty pin
28	FS48	O	Fs select output pin
29	FS44	O	
30	FS32	O	
31	XLM	O	Line mute output pin (“L”: ON, “H”: OFF)
32	—	—	Empty pin
33	SLV-MUT	O	Not used in this set.
34	XSLV-SEL	O	Not used in this set.
35 — 38	AF3 — AF0	I	Pull-up fixed.
39	MP	—	Connected to Ground.
40	XRST	I/O	System reset input/output pin (“L”: ACTIVE)
41	VSS	—	Ground
42	XTAL	O	Not used.
43	EXTAL	I	Operating clock input pin (9.408MHz)
44	XDISP-REQ	O	Pin for communication request output to display controller.
45	—	—	Not used.
46	XMECH-REQ	O	Pin for communication request output to mechanism microcomputer.
47	—	—	Not used.
48	XDISP-ACK	I	Pin for communication acknowledge input from display controller.
49	DM-DI	I	Pin for serial data input from another microcomputer.
50	DM-DO	O	Pin for serial data output to another microcomputer.
51	DM-CK	O	Pin for serial clock output to another microcomputer.
52	XSBSY	I	Pin for SBSY input from master DAT-DSP IC.
53	SR-DTI	I	Pin for serial data input from master DAT-DSP IC.

	Fs 48kHz	Fs 44.1kHz	Fs 32kHz
Pin @,	H	L	L
Pin @.	L	H	L
Pin #/	L	L	H

Pin No.	Pin Name	I/O	Function
54	SR-DTO	O	Pin for serial data output to master DAT-DSP IC.
55	SR-CK	O	Pin for serial clock output to master DAT-DSP IC.
56	AVSS	—	Ground
57	AVREF	—	Reference voltage pin (+5V)
58	AVDD	—	Power supply pin (+5V)
59	XMECH-BSY	I	Pin for communication busy input from mechanism microcomputer. (“L”: BUSY)
60	FOOT-SW1	I	Pull-up fixed.
61	FOOT-SW0	I	Pull-up fixed.
62	MODE1	I	Fixed at “L” level.
63	MODE0	I	Fixed at “H” level.
64	X24/12	I	24/12-hour system display select input pin (“H”: 12-hour system display (US, Canadian model), “L”: 24-hour system display (AEP, UK, German model)).
65	DATE-ODR	I	YY-MM-DD/DD-MM-YY display select input pin (“L”: Fixed to DD-MM-YY display)
66	PRL-REM	I	Pull-up fixed. Para-remote A/D input. (At connect with controller.)
67	X4HEAD	I	Fixed at “L” level.
68	XPRODIO	I	Fixed at “L” level.
69	XFADER	I	Fixed at “L” level.
70	MUT-MONIT	I	Pin for mute monitor input from master DAT-DSP IC.
71	XAES/COA	I	COAX↔AES/EBU Switch signal input.
72	XCNT-S	I	Pull-up fixed.
73	MODE3	I	Fixed at “H” level.
74	MODE2	I	Fixed at “H” level.
75, 76	LED1, 0	O	Remote commander LED output pin
77 — 79	—	—	Not used.
80	ERRO	—	TEST pin. (Not used.)
81 — 85	—	—	Not used.
86	XTEST	I	TEST pin (“L”: TEST MODE)
87	POW-DWN	I	Fixed at “H” level.
88	VSS	—	Ground
89	VDD	—	Power supply pin (+5V)
90	VPP	—	Connect to VDD.
91, 92	—	—	Not used.
93	XADINT	O	A/D digital filter initial setting output pin (“L”: INIT)
94	XDAINT	O	D/A digital filter initial setting output pin (“L”: INIT)
95	REC-DIS	O	Recording current control output pin (“L”: Normally, “H”: Recording current forced OFF)
96	EXSY-MUT	O	EXSY output control pin (“L”: Normally, “H”: EXSY forced OFF)
97	XMST-SEL	O	Signal process IC chip select output pin
98	MST-MUTE	O	Playback data mute output pin (“L”: OFF, “H”: ON)
99, 100	—	—	Not used.

• **DIGITAL BOARD IC502 CXP87532-039Q (MECHANISM MICROCOMPUTER)**

Pin No.	Pin Name	I/O	Function
1	FPM-KI	O	FWD plunger kick control output
2	CAP-RVS	O	Capstan rotation direction control output. “H” for FWD and “L” for REV.
3	BPM-ON	O	Brake plunger ON control output
4	BPM-KI	O	Brake plunger kick control output
5	DRM-ON	O	Drum motor ON control output
6	—	O	Not used.
7	—	O	
8	—	O	
9	—	O	
10	—	O	
11	—	O	
12	—	O	
13	—	O	
14	—	O	
15	LM-EJCT	O	Loading motor rotation direction control output (Eject direction)
16	LM-LOAD	O	Loading motor rotation direction control output (Loading direction)
17	CM-OUT	O	Cassette compartment motor rotation direction control output (OUT direction)
18	CM-IN	O	Cassette compartment motor rotation direction control output (IN direction)
19	XROM-CK	O	EEPROM serial clock output
20	XROM-DT	I/O	EEPROM serial data input/output
21	—	O	Not used.
22	—	O	
23	H-FIX	I	Not used. (Fixed at “H” level.)
24	H-FIX	I	
25	CAS-IN	I	Cassette IN switch input
26	REC-EN	I	REC enable switch input
27	CAS-LCK	I	Cassette compartment lock switch input
28	CAS-OUT	I	Cassette compartment OUT switch input
29	UNLD-SW	I	UNLOAD switch input. “H” in UNLOAD position.
30	LOAD-SW	I	LOAD switch. “H” in STOP position.
31	—	O	Not used.
32	—	O	
33	—	O	
34	—	O	
35	H-FIX	I	Not used. (Fixed at “H” level.)
36	H-FIX	I	
37	H-FIX	I	
38	H-FIX	I	
39	MP	—	Connect to Ground.
40	XRST	I	Reset input. “L” for reset.
41	VSS	—	Ground
42	XTAL	O	Crystal oscillator output pin (9.408MHz). (Not used in this set.)
43	EXTAL	I	Crystal oscillator input pin (9.408MHz)
44	XMECH-BSY	O	Mechanism microcomputer BUSY signal input
45	—	O	Not used.
46	TLED-ON	O	T-END sensor ON output. “H” for ON.
47	SLED-ON	O	S-END sensor ON output. “H” for ON.
48	XSBSY	I	SUB SYNC input from main microcomputer (IC501).
49	—	I	Not used.
50	—	O	
51	—	O	

Pin No.	Pin Name	I/O	Pin Description
52	XMECH-REQ	I	Communication request input from main microcomputer (IC501).
53	MECH-DTI	I	Serial data input from main microcomputer (IC501).
54	MECH-DTO	O	Serial data output to main microcomputer (IC501).
55	MECH-SCK	I	Serial clock input from main microcomputer (IC501).
56	AVSS	—	A/D port Ground
57	AVREF	—	A/D port power supply (+5V)
58	AVDD	—	A/D port power supply (+5V)
59	TEND	I	T-END sensor input
60	SEND	I	S-END sensor input
61	H-FIX	I	Fixed at “H” level.
62	H-FIX	I	
63	THICK	I	Thick switch input
64	SET-MODE	I	Fixed at “H” level.
65	CAS-MODE	I	Fixed at “H” level.
66	ATF-IN	I	ATF pilot signal input
67	TFG	I	T reel FG signal input
68	SFG	I	S reel FG signal input
69	CFG	I	Capstan FG signal input
70	DFG	I	Drum FG signal input
71	DPG	I	Drum PG signal input
72	DREF	I	Drum reference signal input
73	ATF-S2	I	Input of AFT sampling pulse for DPG automatic adjustment.
74	H-FIX	I	Not used. (Fixed at “H” level.)
75	—	O	Not used.
76	XCAS-TST	I	Test pin. “L” for cassette compartment without test mode.
77	MST-CLK	I	Master clock input
78	PBDT	I	PB data for ATF SYNC.
79	SWP	O	Switching pulse output
80	AGC-PWM	O	Output of PWM signal for AGC.
81	T-PWM	O	Output of PWM signal for T reel.
82	S-PWM	O	Output of PWM signal for S reel.
83	D-PWM	O	Output of PWM signal for drum.
84	C-PWM	O	Output of PWM signal for capstan.
85	H-FIX	I	Not used. (Fixed at “H” level.)
86	XTEST	I	Test pin. “L” for test mode. (Used at D PG, PATH and torque.)
87	POW-DWN	I	Not used. (Fixed at “H” level.)
88	VSS	—	Ground
89	VDD	—	+5V power supply
90	VPP	—	Connect to +5V.
91	ATF-S2	O	ATF sampling pulse #2 output
92	AREA	O	AREA signal output
93	—	O	Not used.
94	—	O	
95	—	O	
96	XLP-REC	O	LP REC control output. “L” for LP mode RED.
97	—	O	Not used.
98	—	O	
99	XTLK	O	Reel motor T LOCK control output. “L” for T LOCK.
100	FPM-ON	O	FWD plunger ON control output

• **DIGITAL BOARD IC503 CXD2605Q (MASTER DAT-DSP)**

Pin No.	Pin Name	I/O	Function
1	A8	O	External RAM address output
2	A9	O	External RAM address output
3	VDD	—	+5V
4	A10	O	External RAM address output
5	A11	O	External RAM address output
6	A12	O	External RAM address output
7	A13	O	External RAM address output
8	A14	O	External RAM address output
9	XWE	O	External RAM write enable signal output
10	XOE	O	External RAM output enable signal output
11	XEAN	O	External addressing enable signal output. (Not used in this set.)
12	TST1	I	Test input (Fixed at "L" level.)
13	XT1O	O	X'tal oscillation circuit 1 output
14	XT1I	I	X'tal oscillation circuit 1 input
15	VSS	—	Ground
16	XRST	I	Reset input. "L" for reset.
17	CLKO	O	System clock output. (The frequency is 4.9152 MHz when SELC is set "L" and 8.192 MHz when SELC is set "H".) (Not used in this set.)
18	MINT	O	Control byte (1). Bit 1: Q code decode (intercurve detection) output when "L" and BCK clock output by RX-PLL when "H". (Not used in this set.)
19	ATSY	I	ATF sync signal input
20	MCLK	O	Channel clock (fch) output (Not used in this set.)
21	DREF	O	SBSY cycled Duty 50 signal output
22	SBPM	O	Control byte (1). Bit 1: Output of monitor signal for data transfer to and from microcomputer when "L" ("L" to permit transfer) and F256 clock output by RX-PLL when "H". (Not used in this set.)
23	EXCK	I	Input of clock for data transfer to and from main microcomputer (IC501).
24	SDSI	I	Serial data input from main microcomputer (IC501).
25	SDSO	O	Serial data output to main microcomputer (IC501).
26	SBSY	O	Output of frame sync signal for data transfer to and from main microcomputer (IC501).
27	PLRF	O	Output of PLL clock divided by 5880. (Not used in this set.)
28	CCLK	O	9.8304MHz output when SELC is "L" and 12.288MHz output when SELC is "H". (Not used in this set.)
29	MUTE	I	Mute input. Set "H" to mute, but REC monitor sound will not be muted.
30	MUTM	O	Mute monitor. "H" in muting.
31	UNLK	O	RX-PLL lock monitor signal output. "L" in locking.
32	RFCT	I	Area signal input. ("L" to enable AREA signal and "H" to disable AREA signal.)
33	SYMN	O	RF associated C1 check result monitor signal output. (Not used in this set.)
34	SELB	I	Test pin (Fixed at "H" level.)
35	PLCK	O	Control byte (1). Bit 1: RF-PLL clock output when "L" and F128 clock output by RX-PLL when "H" (Not used in this set.)
36	TST2	I	Test pin (Fixed at "L" level.)
37	RFDT	I	Playback RF signal input
38	XCS	I	Input of chip select signal for data transfer to and from microcomputer. "L" to permit transfer.
39	SWP	I	RF switching pulse. "L" to select A track and "H" to select B track.
40	VSS	—	Ground
41	PIPC	O	Output of ATF pilot signal/descrimination signal for recording signal. "H" to output pilot signal.
42	REPB	O	REC/PB descrimination signal output. "H" for REC mode.
43	REDT	O	Recording signal output.

Pin No.	Pin Name	I/O	Function
44	TST4	I	Test pin (Fixed at “L” level.)
45	PDO	O	RX-PLL phase comparator output
46	SELC	I	Oscillation frequency select signal input (Fixed at “L” level in this set.)
47	MUTA	I	Mute input. “H” to mute, and REC monitor sound is also muted.
48	PLCO	I	RX-PLL’s external VCO clock input (512fs reference)
49	PLVR	O	Output of phase comparator signal for RX-PLL. (2fs generated from PLL clock.) (Not used in this set.)
50	PLRF	O	Output of phase comparator signal for RX-PLL. (RX SYNC detect signal 2fs) (Not used in this set.)
51	MSSL	I	Master mode/slave mode slelect. “H” for master mode. (Fixed at “H” level in this set.)
52	RX	I	Digital interface signal input
53	VDD	—	+5V
54	TX	O	Digital interface signal output
55	SELA	I	Test pin (Fixed at “L” level.)
56	EXSY	I/O	External sync signal input/output
57	EXSN	I/O	External sync signal input/output
58	F128	I/O	128fs signal/256fs signal (high speed) input/output
59	F256	O	256fs signal/512fs signal (high speed) output (Not used in this set.)
60	F512	O	512fs signal output (Not used in this set.)
61	ADLF	I	ADDT, ADDI, ADDN serial data LSB/MSB first select input. “L” for LSB first.
62	DALF	I	DADT, DADO serial data LSB/MSB first select input. “L” for LSB first.
63	XT2O	O	X’tal oscillation circuit 2 output. (Not used in this set.)
64	XT2I	I	X’tal oscillation circuit 2 input
65	VSS	—	Ground
66	XT3O	O	X’tal oscillation circuit 3 output
67	XT3I	I	X’tal oscillation circuit 3 input
68	FSEN	I	F128, BCK, LRCK input/output select input. “H” for output.
69	LR03	O	Inverted LR02 signal (Not used in this set.)
70	LR02	O	Control byte (1). Bit 1: 16BCK delayed LRCK signal when “L” and LRCK clock output by RX-PLL when “H” (Not used in this set.)
71	LR01	O	15BCK delayed LRCK signal
72	LRCK	I/O	fs/2fs (high speed) signal input/output
73	WCK	O	2fs/4fs (high speed) signal output (Not used in this set.)
74	XBCK	O	Inverted BCK signal output
75	BCK	I/O	64fs/128fs (high speed) signal input/output
76	ADDT	I	AD serial data input
77	DADT	O	DA serial data output
78	DADO	I	DIGITAL OUT audio data input
79	ADDI	O	DIGITAL IN audio data output
80	ADDN	I	DIGITAL IN audio data input
81	ERRI	I	DIGITAL OUT Validity flag data input
82	ERRF	O	DADT data’s interpolation data/descrimination signal output. “H” for interpolation data.
83	MNTG	O	“H” output indicates that error correction status monitor data is being output to D7 to D0. (Not used in this set.)
84	D7	I/O	External RAM data input/output (MSB)
85	D6	I/O	External RAM data input/output
86	D5	I/O	External RAM data input/output
87	D4	I/O	External RAM data input/output
88	D3	I/O	External RAM data input/output
89	D2	I/O	External RAM data input/output
90	VSS	—	Ground

Pin No.	Pin Name	I/O	Function
91	D1	I/O	External RAM data input/output
92	D0	I/O	External RAM data input/output (LSB)
93	A0	O	External RAM address output
94	A1	O	External RAM address output
95	A2	O	External RAM address output
96	A3	O	External RAM address output
97	A4	O	External RAM address output
98	A5	O	External RAM address output
99	A6	O	External RAM address output
100	A7	O	External RAM address output

- **SP BOARD IC803 CXD2605R (SLAVE DAT-DSP)**

Pin No.	Pin Name	I/O	Function
1	A8	O	External RAM address output
2	A9	O	External RAM address output
3	VDD	–	+5V
4	A10	O	External RAM address output
5	A11	O	External RAM address output
6	A12	O	External RAM address output
7	A13	O	External RAM address output
8	A14	O	External RAM address output
9	XWE	O	External RAM write enable signal output
10	XOE	O	External RAM output enable signal output
11	XEAN	O	External addressing enable signal output Not used this set (OPEN)
12	TST1	I	Test input (Fixed at "L")
13	XT1O	O	X'tal oscillation circuit 1 output Not used this set (OPEN)
14	XT1I	I	X'tal oscillation circuit 1 input
15	VSS	–	Ground terminal
16	XRST	I	Reset input ("L" for reset)
17	CLKO	O	System clock output (The frequency is 4.9152MHz when SELC is set "L" and 8.192MHz when SEL is set "H") Not used this set (OPEN)
18	MINT	O	Control byte (1) Bit 1: Q code decode (intercurve detection) output when "L" and BCK clock out by RX-PLL when "H" Not used this set (OPEN)
19	ATSY	I	ATF sync signal input Not used this set (Fixed at "L")
20	MCLK	O	Channel clock (fch) output Not used this set (OPEN)
21	DREF	O	SBSY cycled Duty 50 signal output Not used this set (OPEN)
22	SBPM	O	Control byte (1) Bit 1: Output of monitor signal for data transfer to and from microcomputer when "L" ("L" to permit transfer) and F256 clock output by RX-PLL when "H") Not used this set (OPEN)
23	EXCK	I	Input of clock for data transfer to and from main microcomputer (IC501)
24	SDSI	I	Serial data input from main microcomputer (IC501)
25	SDSO	O	Serial data output to main microcomputer (IC501)
26	SBSY	O	Output of clock for data transfer to and from main microcomputer (IC501)
27	PLRF	O	Output of PLL clock divided by 5880 Not used this set (OPEN)
28	CCLK	O	9.8304MHz output when SELC is "L" and 12.288MHz output when SELC is "H" Not used this set (OPEN)
29	MUTE	I	Mute input (Set "H" to mute, but REC monitor sound will not be muted)
30	MUTM	O	Mute monitor ("H" in muting) Not used this set (OPEN)
31	UNLK	O	RX-PLL lock monitor signal output "L" in locking Not used this set (OPEN)
32	RFCT	I	Playback RF signal control ("L" to enable RF signal and "H" to disable RF signal)
33	SYMN	O	RF associated C1 check result monitor signal output Not used this set (OPEN)
34	SELB	I	Test pin (Fixed at "H")
35	PCLK	O	Control byte (1) Bit 1: RF-PLL clock output when "L" and F128 clock output by RX-PLL when "H" Not uded this set (OPEN)
36	TST2	I	Test pin (Fixed at "H")
37	RFDT	I	Playback RF signal input
38	XCS	I	Input of chip select signal for data transfer to and from microcomputer "L" to permit transfer
39	SWP	I	RF switching pulse ("L" to select A track and "H" to select B track)
40	VSS	–	Ground terminal

Pin No.	Pin Name	I/O	Function
41	PIPC	O	Output of ATF pilot signal/descrimination signal for recording signal (“H” to output pilot signal Not used this set (OPEN)
42	REPB	O	REC/PB descrimination signal output (“H” for REC mode) Not used this set (OPEN)
43	REDT	O	Recording signal output Not used this set (OPEN)
44	TST4	I	Test pin (Fixed at “L”)
45	PDO	O	RX-PLL phase comparator output Not used this set (OPEN)
46	SELC	I	Oscillation frequency select signal input (Fixed at “L”)
47	MUTA	I	Mute input “H” to mute, and REC monitor sound is also muted (Fixed at “L”)
48	PLCO	I	RX-PLL’s external VCO clock input (512fs reference) Not used this set (Fixed at “H”)
49	PLVR	O	Output of phase comparator signal for RX-PLL (2fs generated from PLL clock) Not used this set (OPEN)
50	PLRF	O	Output of phase comparator signal for RX-PLL (RX SYNC detect signal 2fs) Not used this set (OPEN)
51	MSSL	I	Master mode/slave mode select “H” for master mode (Fixed at “H”)
52	RX	I	Digital interface signal input (Fixed at “L”)
53	VDD	–	+5V
54	TX	O	Digital interface signal output Not used this set (OPEN)
55	SELA	I	Test pin (Fixed at “L”)
56	EXSY	I/O	External sync signal input/output
57	EXSN	I/O	External sync signal input/output Not used this set (Fixed at “L”)
58	F128	I/O	128fs signal/256fs signal (high speed) input/output
59	F256	O	256fs signal/512fs signal (high speed) output Not used this set (OPEN)
60	F512	O	512fs signal output Not used this set (OPEN)
61	ADLF	I	ADDT, ADDI, ADDN serial data LSB/MSB first select input (“L” for LSB first) (Fixed at “L”)
62	DALF	I	DADT, DADO sertial data LSB/MSB first select input (“L” for LSB first) (Fixed at “L”)
63	XT2O	O	X’tal oscillation circuit 2 output Not used this set (OPEN)
64	XT2I	I	X’tal oscillation circuit 2 input Not used this set (Fixed at “L”)
65	VSS	–	Ground terminal
66	XT3O	O	X’tal oscillation circuit 3 output Not used this set (OPEN)
67	XT3I	I	X’tal oscillation circuit 3 input
68	FSEN	I	F128, BCK, LRCK input/output select input (“H” for output) (Fixed at “L”)
69	LR03	O	Inverted LR02 signal Not used this set (OPEN)
70	LR02	O	Control byte (1) (Bit 1: 16BCK delayed LRCK signal when “L” and LRCK clock output by RX-PLL when “H”) Not used this set (OPEN)
71	LR01	O	15BCK delayed LRCK signal Not used this set (OPEN)
72	LRCK	I/O	fs/2fs (high speed) signal input/output
73	WCK	O	2fs/4fs (high speed) signal output Not used this set (OPEN)
74	XBCK	O	Inverted BCK signal output Not used this set (Fixed at “L”)
75	BCK	I/O	64fs/128fs (high speed) signal input/output
76	ADDT	I	AD serial data input Not used this set (Fixed at “L”)
77	DADT	O	DA serial data output
78	DADO	I	DIGITAL OUT audio data input Not used this set (Fixed at “L”)
79	ADDI	O	DIGITAL IN audio data output Not used this set (OPEN)
80	ADDN	I	DIGITAL IN audio data input Not used this set (Fixed at “L”)
81	ERRI	I	DIGITAL OUT Validity flag data input Not used this set (Fixed at “L”)
82	ERRF	O	DADT data’s interpolation data/descrimination signal output (“H” for interpolation data) Not used this set (OPEN)

Pin No.	Pin Name	I/O	Function
83	MNTG	O	"H" output indicates that error correction status monitor data is being output to D7 to D0 Not used this set (OPEN)
84	D7	I/O	External RAM data input/output (MSB)
85	D6	I/O	External RAM data input/output
86	D5	I/O	External RAM data input/output
87	D4	I/O	External RAM data input/output
88	D3	I/O	External RAM data input/output
89	D2	I/O	External RAM data input/output
90	VSS	–	Ground terminal
91	D1	I/O	External RAM data input/output
92	D0	I/O	External RAM data input/output (LSB)
93	A0	O	External RAM address output
94	A1	O	External RAM address output
95	A2	O	External RAM address output
96	A3	O	External RAM address output
97	A4	O	External RAM address output
98	A5	O	External RAM address output
99	A6	O	External RAM address output
100	A7	O	External RAM address output

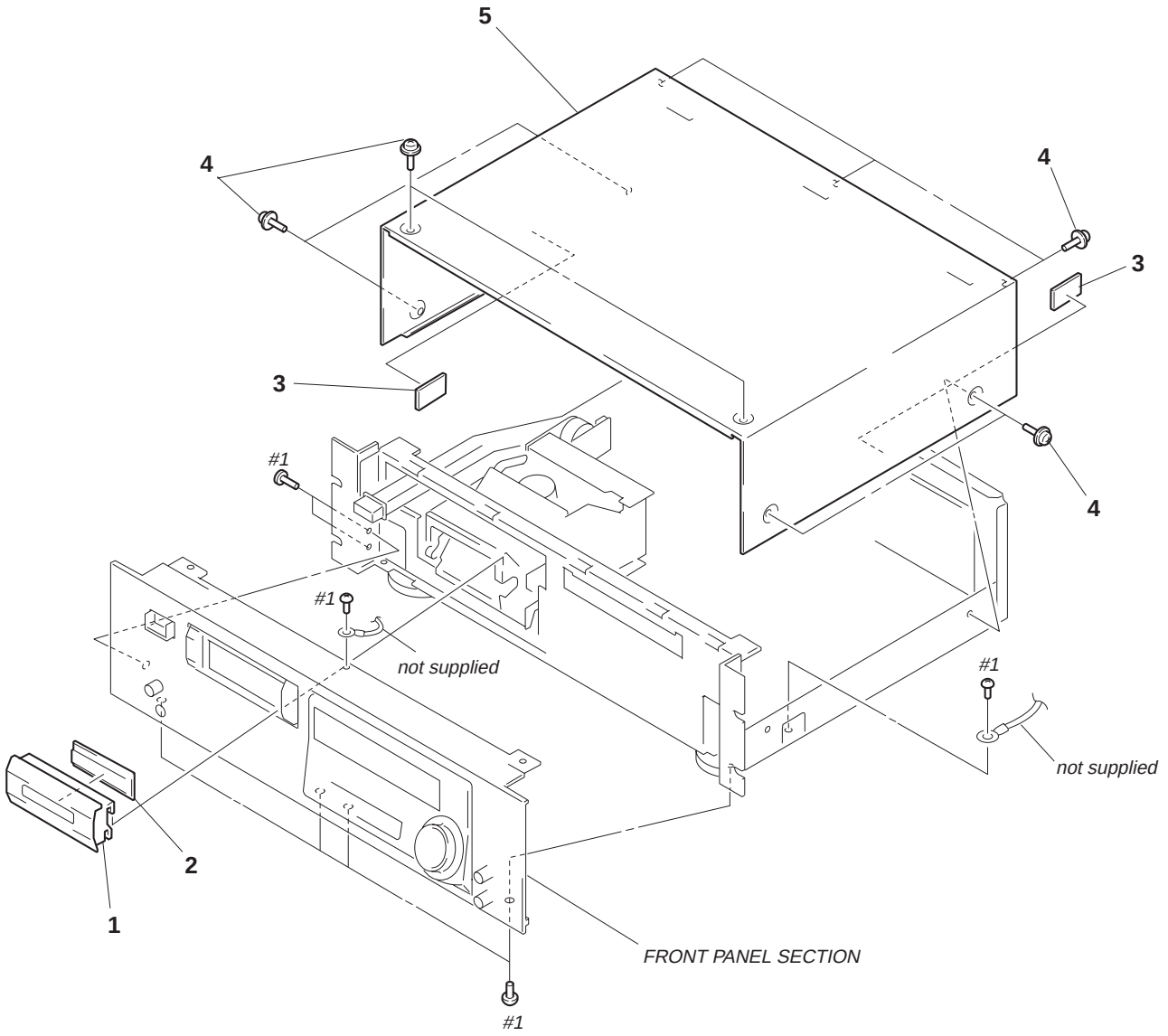
SECTION 5
EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearrance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

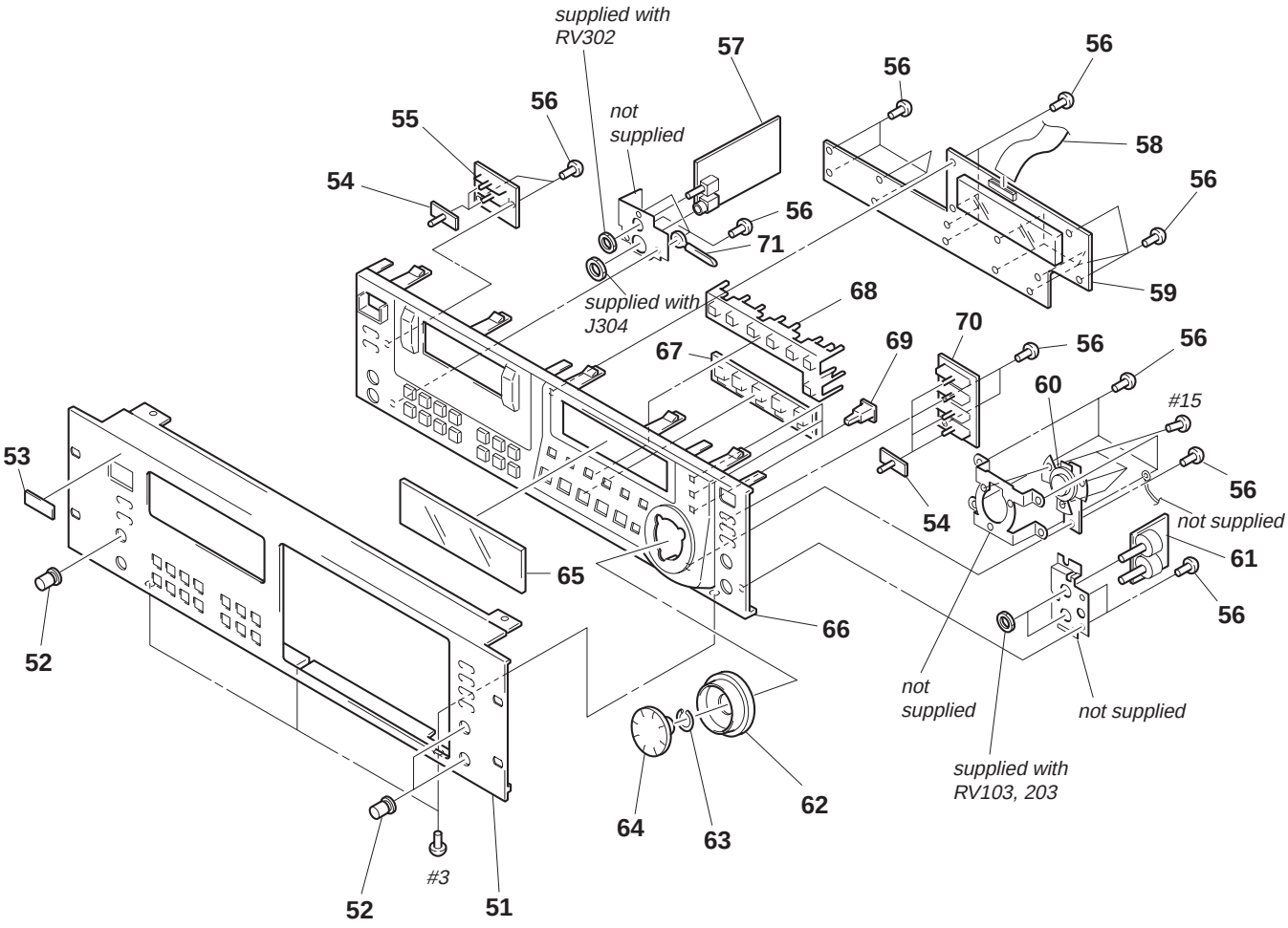
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

(1) COVER



Ref. No.	Part No.	Description	Remark
1	3-007-485-01	LID (CASSETTE COMPARTMENT)	
2	3-007-486-01	WINDOW (CASSETTE COMPARTMENT)	
* 3	4-951-532-01	CUSHION	
4	3-704-366-21	SCREW (CASE) (M 3X10)	
* 5	4-986-210-01	COVER	

(2) FRONT PANEL SECTION

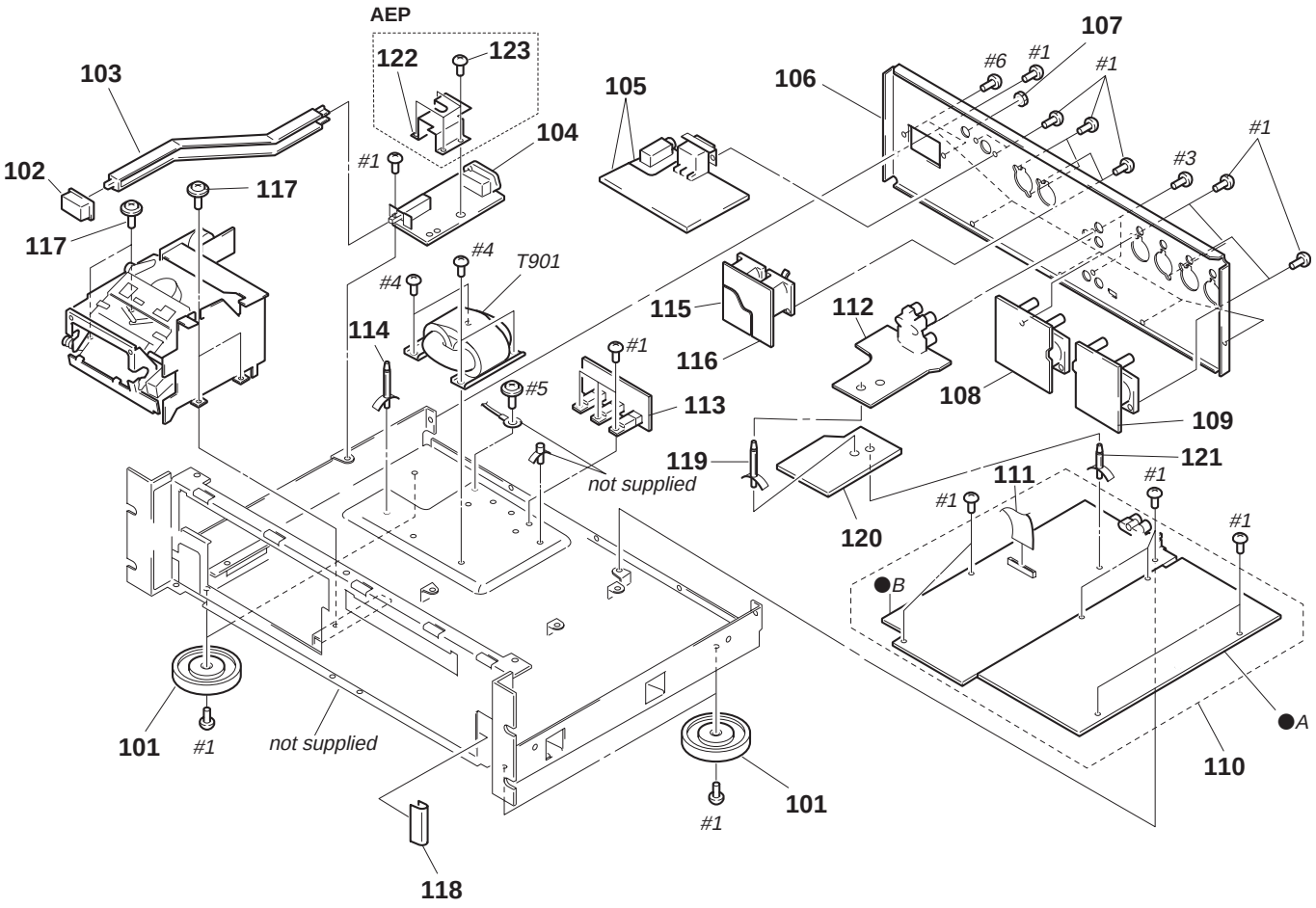


Ref. No.	Part No.	Description	Remark
51	3-007-731-12	PANEL, FRONT	
52	X-4947-852-1	KNOB (1) ASSY	
53	4-908-848-31	EMBLEM, SONY	
54	3-917-216-31	KNOB (TIMER)	
* 55	1-664-483-11	REM SW BOARD	
56	4-951-620-01	SCREW (2.6X8), +BVTP	
* 57	1-664-486-11	HP BOARD	
58	1-769-541-11	WIRE (FLAT TYPE) (17 CORE)	
* 59	A-2007-710-A	DISPLAY BOARD, COMPLETE	
* 60	1-664-487-11	SHUTTLE BOARD	
* 61	1-664-485-11	REC VOL BOARD	

Ref. No.	Part No.	Description	Remark
62	4-983-619-11	RING, SHUTTLE	
63	3-354-981-01	SPRING (SUS), RING	
64	4-983-620-01	DIAL, JOG	
65	4-986-398-01	WINDOW, INDICATION	
66	X-3373-382-1	BASE ASSY, PANEL	
67	4-986-220-12	BUTTON (PLAY) (⏏. ■. ▷. ▯▯. ●)	
68	4-986-217-12	BUTTON (AMS) (⏮. ⏭. ◀◀. ▶▶. ○. ●)	
69	4-986-218-01	BUTTON (3 KEY)	
* 70	1-664-484-11	INPUT SW BOARD	
71	3-703-397-01	STOPPER, WIRING	

(3) CHASSIS SECTION

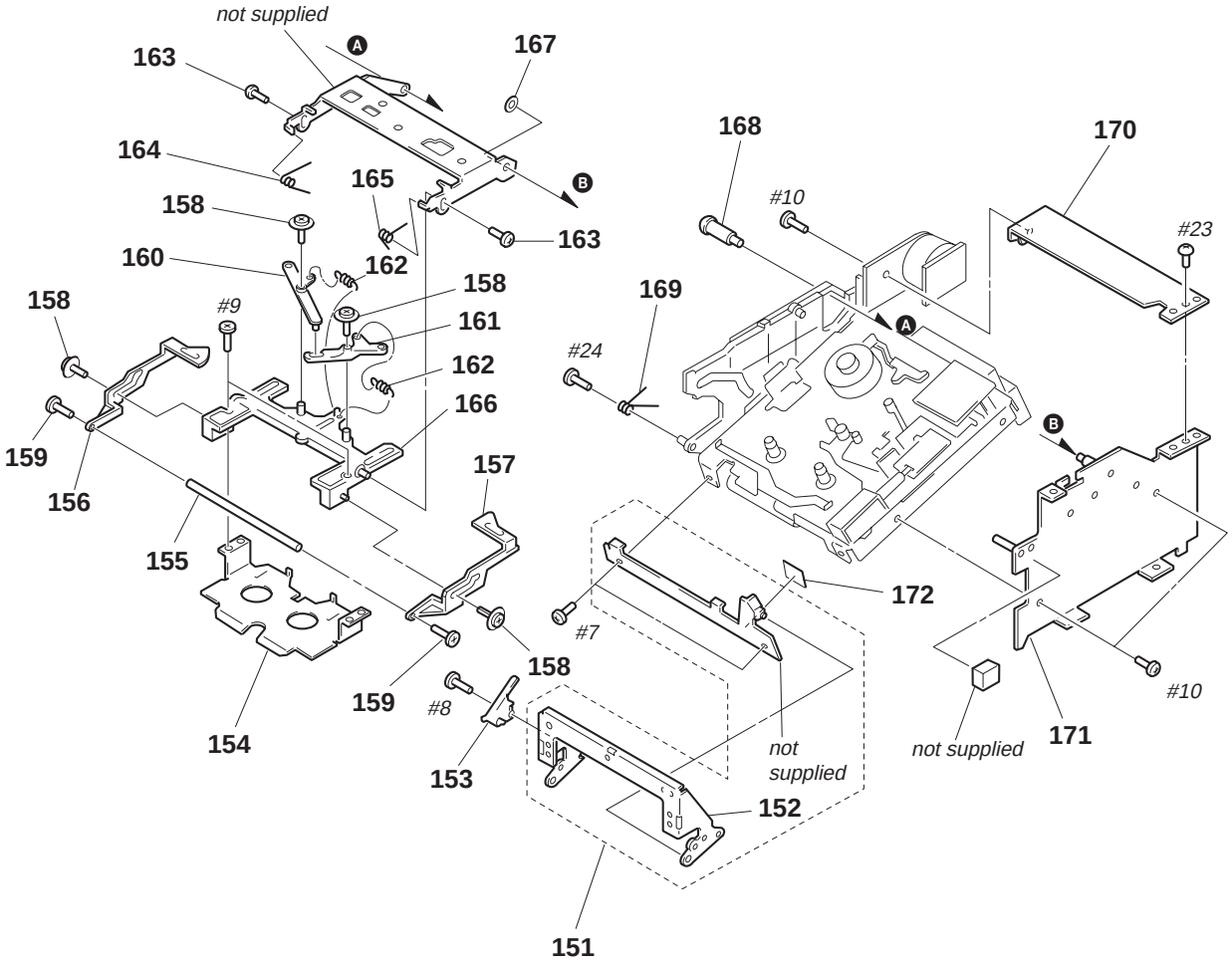
● A: AUDIO board
● B: DIGITAL board



Ref. No.	Part No.	Description	Remark
101	4-956-885-01	FOOT (F58175S2W)	
102	4-923-520-71	KNOB, POWER (POWER)	
* 103	4-986-225-01	LEVER (POW)	
* 104	1-664-488-11	PRIMARY BOARD	
* 105	A-2007-645-A	REMOTE BOARD, COMPLETE	
* 106	3-007-688-41	PANEL, BACK (US, Canadian)	
* 106	3-007-688-51	PANEL, BACK (AEP, UK)	
107	3-724-182-01	NUT (SMALL JACK), M 6	
* 108	A-2007-642-A	ANA OUT BOARD, COMPLETE	
* 109	A-2007-651-A	ANA IN BOARD, COMPLETE	
* 110	A-2007-712-A	MAIN BOARD, COMPLETE	
111	1-769-542-11	WIRE (FLAT TYPE) (31 CORE)	
* 112	A-2007-646-A	UNBAL BOARD, COMPLETE	
* 113	1-664-490-11	REG BOARD	
114	4-924-098-81	HOLDER, PC BOARD	
* 115	1-664-494-11	DIG OUT BOARD	
* 116	A-2007-643-A	DIG IN BOARD, COMPLETE	
117	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6	
118	3-846-068-00	SPACER	
* 119	4-924-098-91	HOLDER, PC BOARD	
* 120	1-664-497-11	SP BOARD	
* 121	4-954-051-41	HOLDER, PC BOARD	
122	4-988-365-01	COVER (D)	
123	4-812-134-11	RIVET (DIA. 3.5), NYLON	
⚠T901	1-431-064-11	TRANSFORMER, POWER (US, Canadian)	
⚠T901	1-431-065-11	TRANSFORMER, POWER (AEP, UK)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

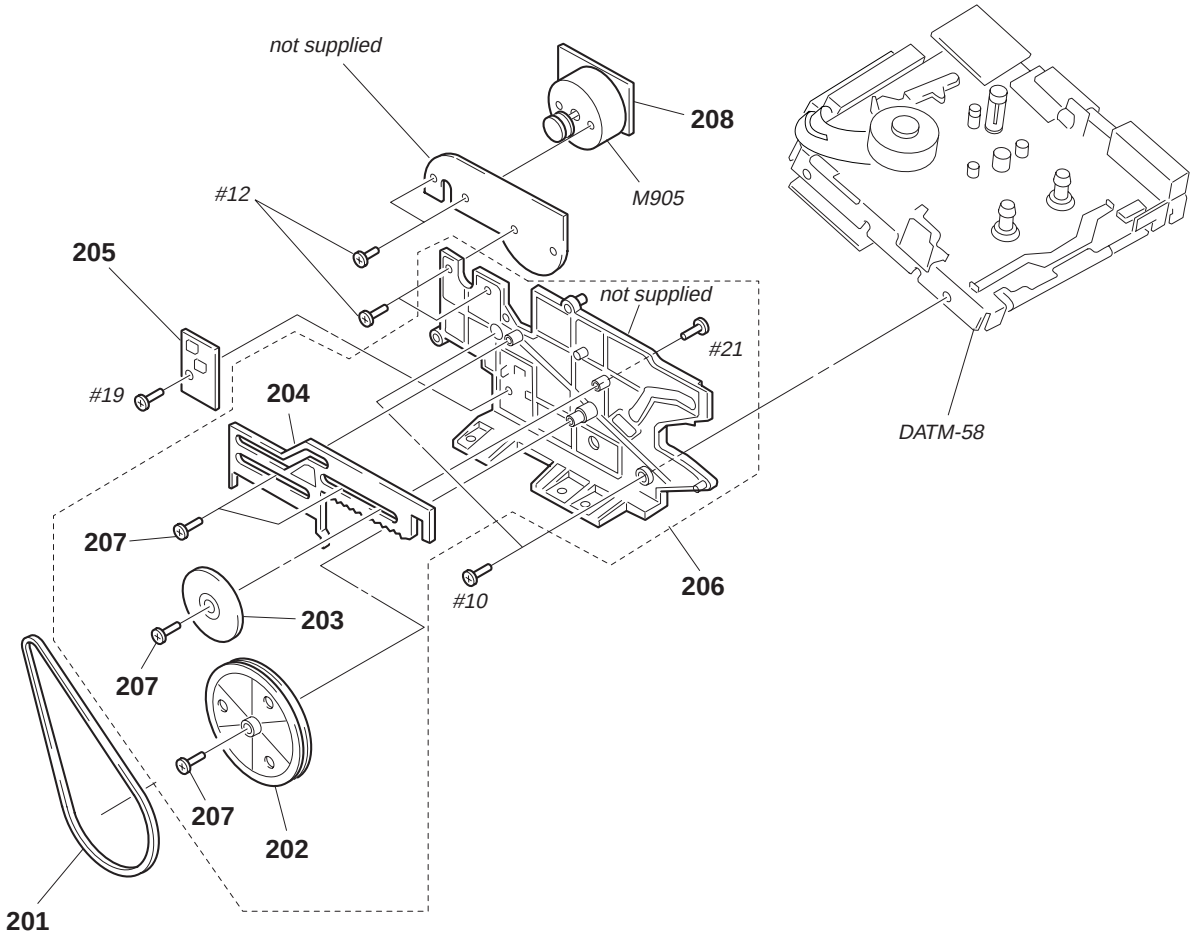
(4) CASSETTE COMPARTMENT SECTION-1



Ref. No.	Part No.	Description	Remark
* 151	X-3371-758-1	PLATE ASSY, FULCRUM	
152	3-373-225-01	HOLDER (WINDOW)	
153	3-373-220-01	ARM (JOINT)	
154	3-373-224-01	HOLDER (LOWER)	
* 155	3-373-217-01	SHAFT (JOINT)	
156	3-373-223-01	SLIDER (L)	
157	3-373-222-01	SLIDER (R)	
158	3-318-201-11	SCREW (B) (1.4X3), TAPPING	
159	3-345-648-61	SCREW (M 1.4), TOOTHED LOCK	
160	3-373-219-01	LEVER (L)	
161	3-373-218-01	LEVER (R)	

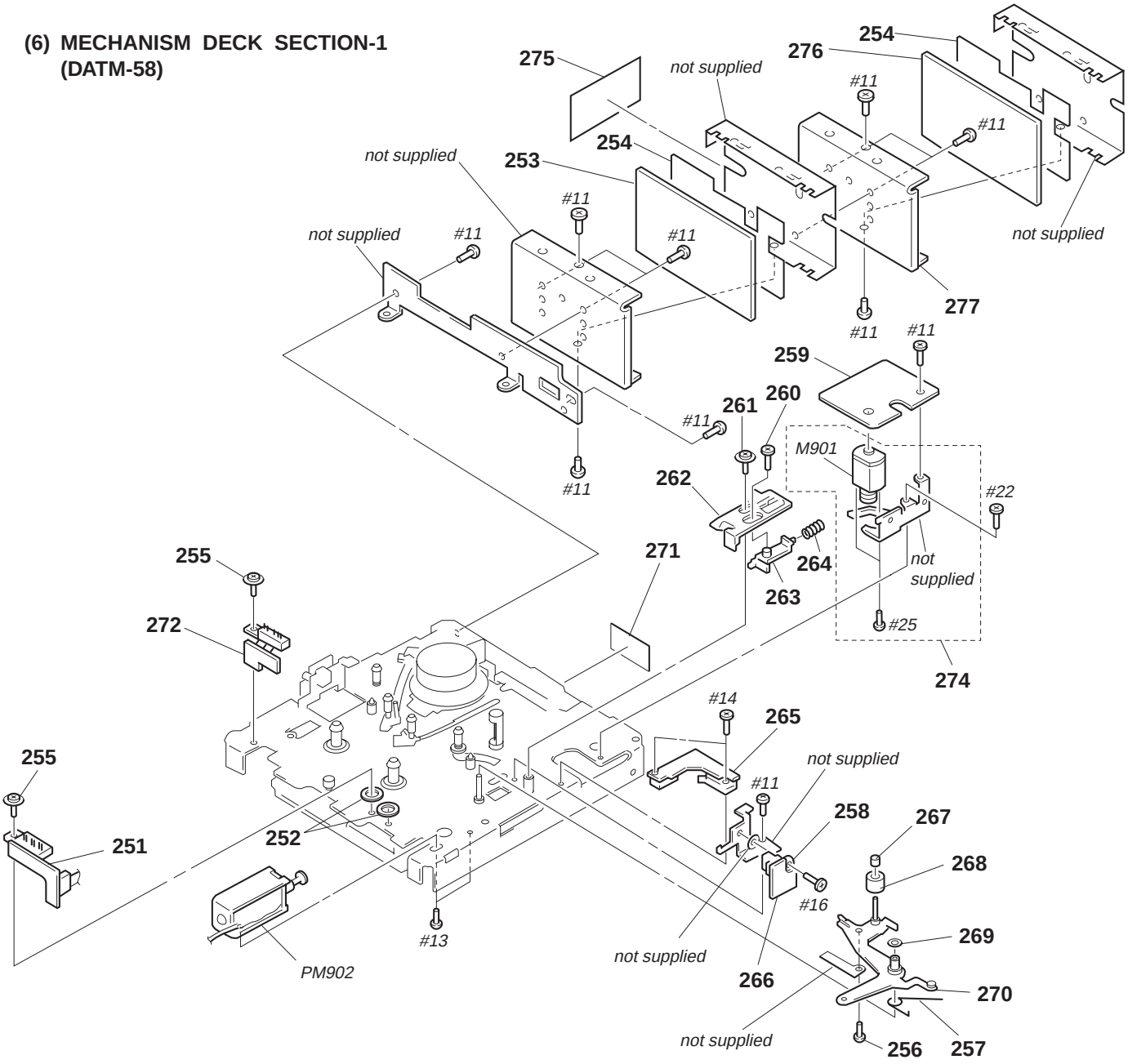
Ref. No.	Part No.	Description	Remark
162	3-632-859-00	SPRING, BRAKE LEVER RETURN	
163	3-318-203-61	SCREW (B 1.7X4), TAPPING	
164	3-373-216-01	SPRING (L), TORSION	
165	3-373-215-01	SPRING (R), TORSION	
166	3-373-237-03	HOLDER (UPPER), CASSETTE	
167	3-307-948-21	WASHER, NYLON	
168	4-931-471-01	SCREW (STEP)	
169	3-373-212-01	SPRING (CASSETTE)	
* 170	3-909-720-11	REINFORCEMENT	
* 171	X-3371-759-1	PLATE (R) ASSY, SIDE	
172	3-908-780-01	SHEET	

(5) CASSETTE COMPARTMENT SECTION-2



Ref. No.	Part No.	Description	Remark
201	3-562-462-00	BELT, CAPSTAN	
202	3-373-214-01	PULLEY	
203	3-373-213-01	GEAR, DRIVING	
* 204	X-3364-426-1	SLIDER ASSY	
* 205	1-655-916-11	SW BOARD	
206	A-2003-907-I	CHASSIS (L) ASSY	
207	2-623-756-01	SCREW, (B 1.7X3), TAPPING	
* 208	1-655-913-11	MOTOR BOARD	
M905	X-3370-655-1	MOTOR ASSY (CASSETTE COMPARTMENT)	

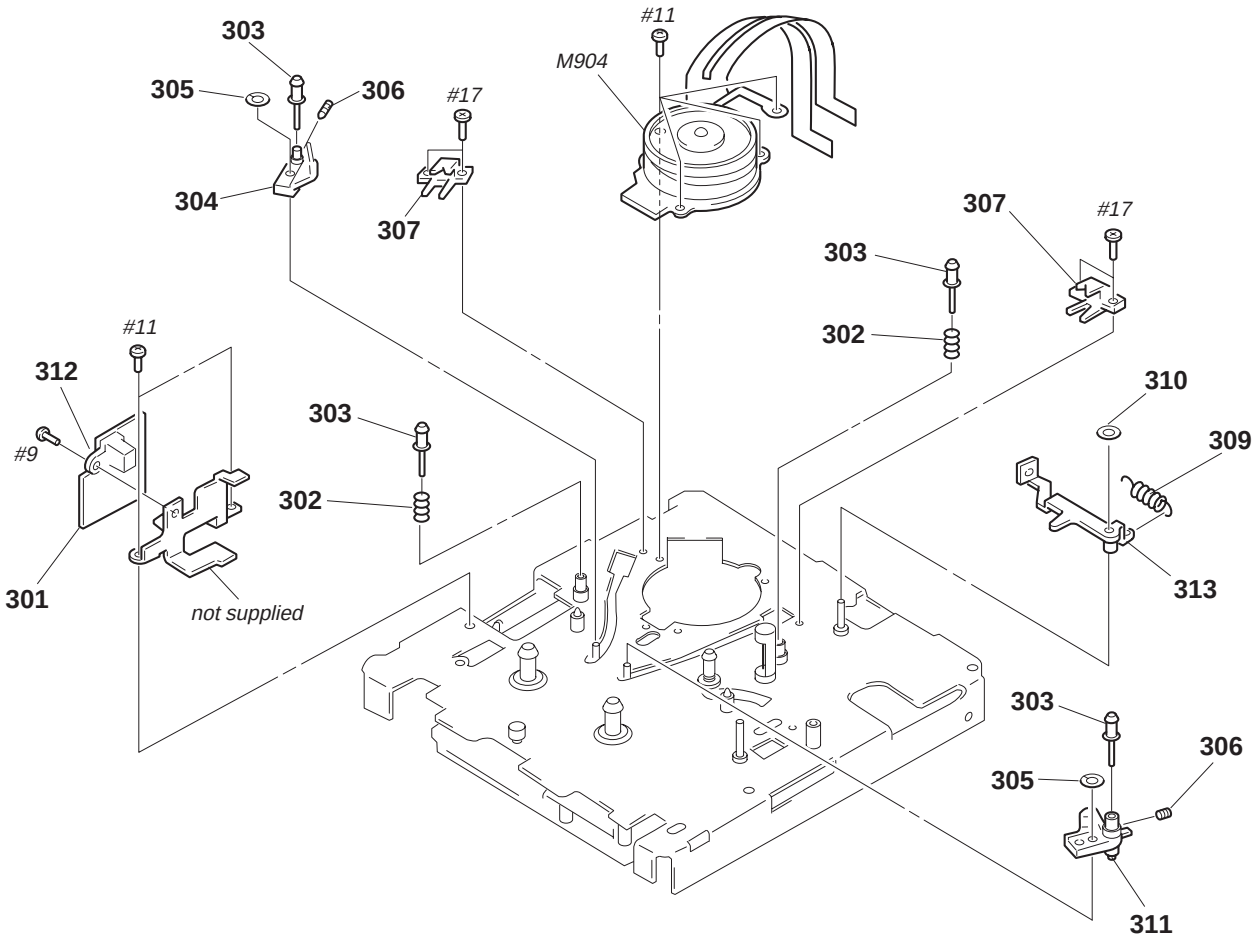
(6) MECHANISM DECK SECTION-1 (DATM-58)



Ref. No.	Part No.	Description	Remark
* 251	1-654-393-11	REC EN BOARD	
252	3-344-781-01	WASHER, POLYETHYLENE	
* 253	A-2006-561-A	RF AMP BOARD, COMPLETE	
* 254	3-362-537-01	SHEET (RF)	
255	3-321-041-01	SCREW (M 1.7X3.5), TAPPING	
256	3-704-244-01	SCREW (P 1.7X1.6)	
257	3-931-541-01	SPRING (PINCH)	
258	A-2004-299-A	DETECTION (R) ASSY, E	
* 259	1-655-286-11	LOADING MOTOR BOARD	
260	2-623-756-01	SCREW, (B 1.7X3), TAPPING	
261	3-703-502-11	SCREW	
262	3-362-148-01	SLIDER (PINCH)	
263	3-362-149-01	SLIDER (LIMITTER)	
264	3-564-035-01	SPRING, COMPRESSION	

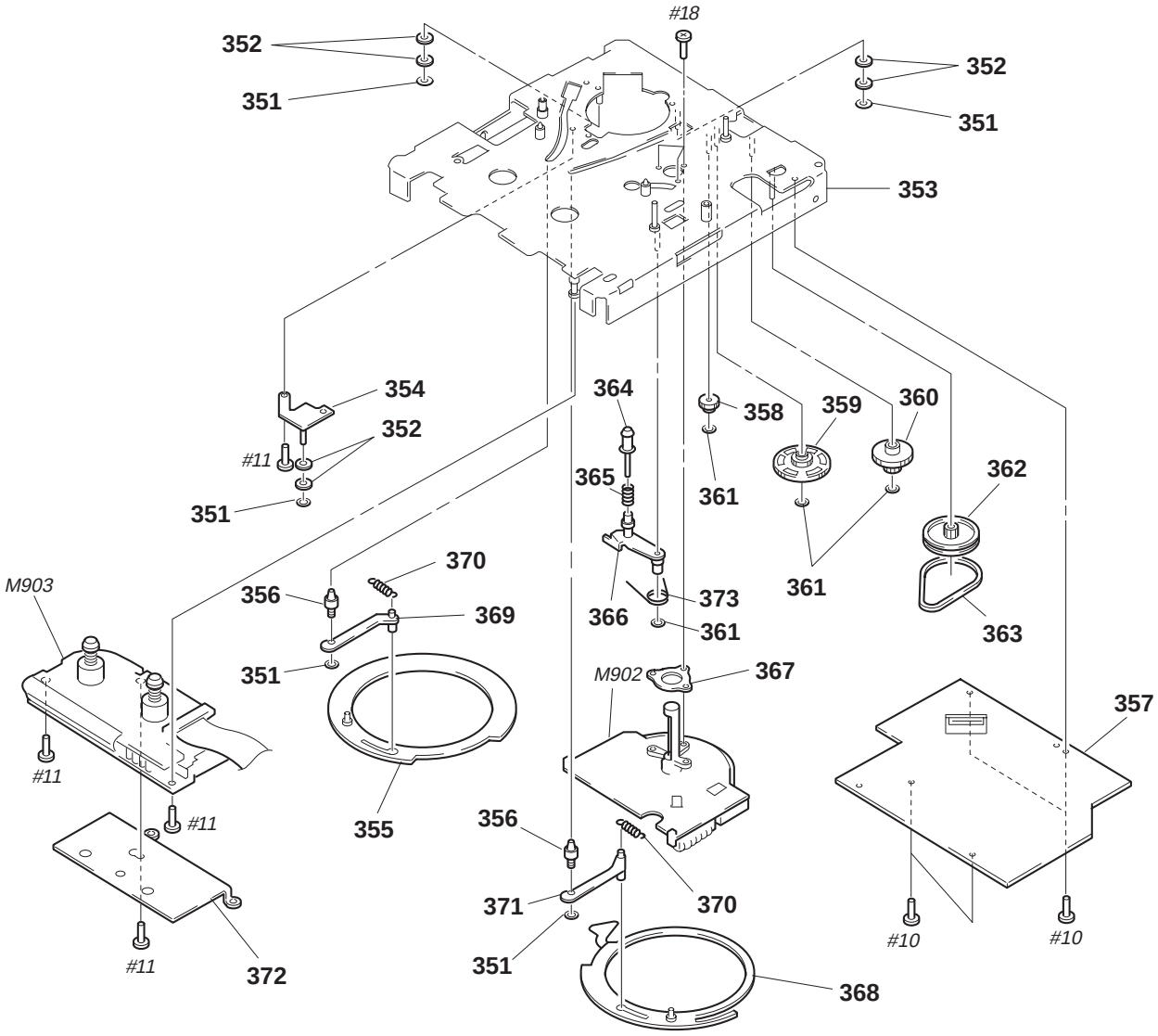
Ref. No.	Part No.	Description	Remark
* 265	1-655-285-11	LOAD SW BOARD	
* 266	1-654-391-11	T END BOARD	
267	3-337-626-01	CAP, PINCH ROLLER	
268	X-3337-610-1	PINCH ROLLER ASSY	
269	3-701-436-11	WASHER, STOPPER	
270	X-3362-021-1	LEVER (PINCH ROLLER) ASSY	
271	3-366-886-01	SHEET (RF BRACKET)	
* 272	1-654-394-12	THICK BOARD	
274	A-2004-301-A	MOTOR ASSY, CONTROL	
* 275	3-914-656-01	SHEET (RF FLEXIBLE)	
* 276	A-2006-207-A	AMPLIFIER BOARD, COMPLETE	
* 277	3-337-686-11	CASE (LOWER), SHIELD	
M901	A-2003-660-A	MOTOR ASSY (LOADING)	
PM902	1-454-522-11	SOLENOID, PLUNGER	

(7) MECHANISM DECK SECTION-2 (DATM-58)



Ref. No.	Part No.	Description	Remark
* 301	1-654-392-11	S END BOARD	
302	3-573-470-00	SPRING, COMPRESSION	
303	X-3371-518-1	ROLLER GUIDE ASSY	
304	X-3362-028-1	SLANT BLOCK (L2) ASSY	
305	3-341-752-11	WASHER, POLYETHYLENE	
306	3-362-152-01	SCREW (RETURN GUIDE BOSS)	
307	3-912-011-01	CATCHER	
309	3-929-804-01	SPRING, TENSION	
310	3-701-436-11	WASHER, STOPPER	
311	X-3362-029-1	SLANT BLOCK (R2) ASSY	
312	A-2004-550-A	DETECTION (L) ASSY, E	
313	X-3371-230-1	LEVER (CLEANER) ASSY	
M904	8-848-549-11	DRUM ASSY DOU-15A	

(8) MECHANISM DECK SECTION-3 (DATM-58)



Ref. No.	Part No.	Description	Remark
351	3-559-408-11	WASHER, POLYETHYLENE, DIA. 1.2	
352	3-337-622-01	ROLLER, RING	
* 353	X-3362-030-7	CHASSIS ASSY	
354	X-3370-186-1	ARM (RING ROLLER) ASSY	
355	X-3369-705-1	RING (L) ASSY, LOADING	
356	3-362-151-01	BOSS (GUIDE)	
* 357	A-2007-321-A	DRUM DRIVE BOARD, COMPLETE	
358	3-372-619-01	GEAR	
359	3-345-181-01	GEAR (LOADING A)	
360	3-362-155-01	GEAR (A)	
361	3-701-436-11	WASHER, STOPPER	
362	4-932-338-01	PULLEY (A)	
363	4-913-325-01	BELT, TAKE-UP	

Ref. No.	Part No.	Description	Remark
364	X-3371-518-1	ROLLER GUIDE ASSY	
365	3-573-470-00	SPRING, COMPRESSION	
* 366	X-3362-020-1	LEVER (F GUIDE) ASSY	
* 367	3-362-156-01	BRACKET (CAPSTAN)	
368	X-3362-204-1	GEAR (LOAD) ASSY	
* 369	X-3362-024-1	LEVER (LOADING L) ASSY	
370	3-337-653-01	SPRING, TENSION	
* 371	X-3362-025-1	LEVER (LOADING R) ASSY	
* 372	3-929-801-01	BRACKET (MD PC BOARD)	
373	3-375-034-01	SPRING (F GUIDE)	
M902	8-835-306-01	MOTOR, DC U-17A (CAPSTAN)	
M903	8-835-205-01	MOTOR, DC U-2A (REEL) (including PM901)	

AMPLIFIER **ANA IN**

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description				Remark
*	A-2006-207-A	AMPLIFIER BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C51	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C52	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C53	1-162-638-11	CERAMIC CHIP	1uF		16V	
C54	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V	
C55	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C57	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C58	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C59	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V	
C60	1-162-638-11	CERAMIC CHIP	1uF		16V	
C61	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C62	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C63	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C64	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C66	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C69	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C71	1-164-005-11	CERAMIC CHIP	0.47uF		25V	
C72	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
		< CONNECTOR >				
CN51	1-569-349-11	CONNECTOR, F.P.C 6P				
* CN52	1-564-725-11	PIN, CONNECTOR (SMALL TYPE) 9P				
		< IC >				
IC51	8-752-039-01	IC CXA1364R				
		< COIL >				
L51	1-408-781-00	INDUCTOR CHIP 22uH				
L52	1-408-789-21	INDUCTOR CHIP 100uH				
L53	1-408-781-00	INDUCTOR CHIP 22uH				
		< TRANSISTOR >				
Q51	8-729-421-19	TRANSISTOR UN2213				
Q52	8-729-421-19	TRANSISTOR UN2213				
Q53	8-729-421-19	TRANSISTOR UN2213				
Q54	8-729-421-19	TRANSISTOR UN2213				
Q55	8-729-421-19	TRANSISTOR UN2213				
		< RESISTOR >				
R51	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R52	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R53	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R54	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R55	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R56	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R57	1-216-084-00	METAL CHIP	30K	5%	1/10W	
R58	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R59	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R60	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R61	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R62	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R63	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
**********						
*	A-2007-651-A	ANA IN BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C131	1-126-051-11	ELECT	47uF	20%	50V	
C132	1-126-051-11	ELECT	47uF	20%	50V	
C133	1-107-597-11	CERAMIC	22PF	10%	500V	
C231	1-126-051-11	ELECT	47uF	20%	50V	
C232	1-126-051-11	ELECT	47uF	20%	50V	
C233	1-107-597-11	CERAMIC	22PF	10%	500V	
C376	1-136-165-00	FILM	0.1uF	5%	50V	
C377	1-136-165-00	FILM	0.1uF	5%	50V	
		< CONNECTOR >				
CN312	1-691-766-21	PLUG (MICRO CONNECTOR) 4P				

Ref. No.	Part No.	Description				Remark
		< DIODE >				
D105	8-719-987-63	DIODE 1N4148M				
D106	8-719-987-63	DIODE 1N4148M				
D205	8-719-987-63	DIODE 1N4148M				
D206	8-719-987-63	DIODE 1N4148M				
		< IC >				
IC323	8-759-981-96	IC RC4560D				
IC324	8-759-981-96	IC RC4560D				
		< JACK >				
J305	1-750-786-11	CONNECTOR (XLR TYPE) 3P (ANALOG (BALANCE) IN)				
		< RESISTOR >				
R141	1-215-445-00	METAL	10K	1%	1/4W	
R142	1-215-445-00	METAL	10K	1%	1/4W	
R143	1-215-453-00	METAL	22K	1%	1/4W	
R144	1-215-453-00	METAL	22K	1%	1/4W	
R145	1-215-445-00	METAL	10K	1%	1/4W	
R146	1-215-445-00	METAL	10K	1%	1/4W	
R147	1-215-413-00	METAL	470	1%	1/4W	
R148	1-215-433-00	METAL	3.3K	1%	1/4W	
R149	1-215-397-00	METAL	100	1%	1/4W	
R241	1-215-445-00	METAL	10K	1%	1/4W	
R242	1-215-445-00	METAL	10K	1%	1/4W	
R243	1-215-453-00	METAL	22K	1%	1/4W	
R244	1-215-453-00	METAL	22K	1%	1/4W	
R245	1-215-445-00	METAL	10K	1%	1/4W	
R246	1-215-445-00	METAL	10K	1%	1/4W	
R247	1-215-413-00	METAL	470	1%	1/4W	
R248	1-215-433-00	METAL	3.3K	1%	1/4W	
R249	1-215-397-00	METAL	100	1%	1/4W	
		< VARIABLE RESISTOR >				
RV101	1-223-877-11	RES, VAR, CARBON 10K (ANALOG (BALANCE) IN CH-1 (L) LEVEL)				
RV201	1-223-877-11	RES, VAR, CARBON 10K (ANALOG (BALANCE) IN CH-2 (R) LEVEL)				
**********						
*	A-2007-642-A	ANA OUT BOARD, COMPLETE **********				
		< CAPACITOR >				
C134	1-107-597-11	CERAMIC	22PF	10%	500V	
C135	1-126-051-11	ELECT	47uF	20%	50V	
C136	1-107-597-11	CERAMIC	22PF	10%	500V	
C137	1-107-597-11	CERAMIC	22PF	10%	500V	
C138	1-126-024-11	ELECT	220uF	20%	25V	
C139	1-126-024-11	ELECT	220uF	20%	25V	
C234	1-107-597-11	CERAMIC	22PF	10%	500V	
C235	1-126-051-11	ELECT	47uF	20%	50V	
C236	1-107-597-11	CERAMIC	22PF	10%	500V	
C237	1-107-597-11	CERAMIC	22PF	10%	500V	
C238	1-126-024-11	ELECT	220uF	20%	25V	
C239	1-126-024-11	ELECT	220uF	20%	25V	
C378	1-136-165-00	FILM	0.1uF	5%	50V	
C379	1-136-165-00	FILM	0.1uF	5%	50V	
		< CONNECTOR >				
CN311	1-691-766-41	PLUG (MICRO CONNECTOR) 4P				
		< IC >				
IC103	8-759-981-96	IC RC4560D				
IC104	8-759-900-72	IC NE5532P				
IC203	8-759-981-96	IC RC4560D				
IC204	8-759-900-72	IC NE5532P				
		< JACK >				
J306	1-750-785-11	CONNECTOR (XLR TYPE) 3P (ANALOG (BALANCE) OUT)				
		< RESISTOR >				
R150	1-215-421-00	METAL	1K	1%	1/4W	
R151	1-215-429-00	METAL	2.2K	1%	1/4W	
R152	1-215-445-00	METAL	10K	1%	1/4W	
R153	1-215-445-00	METAL	10K	1%	1/4W	
R154	1-215-473-00	METAL	150K	1%	1/4W	
R156	1-215-453-00	METAL	22K	1%	1/4W	
R157	1-215-445-00	METAL	10K	1%	1/4W	
R158	1-215-446-00	METAL	11K	1%	1/4W	
R160	1-215-457-00	METAL	33K	1%	1/4W	
R161	1-215-445-00	METAL	10K	1%	1/4W	
R162	1-215-389-00	METAL	47	1%	1/4W	
R163	1-215-389-00	METAL	47	1%	1/4W	
R164	1-215-445-00	METAL	10K	1%	1/4W	
R165	1-215-445-00	METAL	10K	1%	1/4W	
R166	1-215-469-00	METAL	100K	1%	1/4W	
R167	1-215-469-00	METAL	100K	1%	1/4W	
R250	1-215-421-00	METAL	1K	1%	1/4W	
R251	1-215-429-00	METAL	2.2K	1%	1/4W	
R253	1-215-445-00	METAL	10K	1%	1/4W	
R254	1-215-473-00	METAL	150K	1%	1/4W	
R256	1-215-453-00	METAL	22K	1%	1/4W	
R257	1-215-445-00	METAL	10K	1%	1/4W	
R258	1-215-446-00	METAL	11K	1%	1/4W	
R260	1-215-457-00	METAL	33K	1%	1/4W	
R261	1-215-445-00	METAL	10K	1%	1/4W	
R262	1-215-389-00	METAL	47	1%	1/4W	

ANA OUT **DIG IN** **DIG OUT** **DISPLAY**

Ref. No.	Part No.	Description				Remark
R263	1-215-389-00	METAL	47	1%	1/4W	
R264	1-215-445-00	METAL	10K	1%	1/4W	
R265	1-215-445-00	METAL	10K	1%	1/4W	
R266	1-215-469-00	METAL	100K	1%	1/4W	
R267	1-215-469-00	METAL	100K	1%	1/4W	
		< VARIABLE RESISTOR >				
RV102	1-223-877-11	RES, VAR, CARBON 10K (ANALOG (BALANCE) OUT CH-1 (L) LEVEL)				
RV202	1-223-877-11	RES, VAR, CARBON 10K (ANALOG (BALANCE) OUT CH-2 (R) LEVEL)				
**********						
*	A-2007-643-A	DIG IN BOARD, COMPLETE **********				
		< CAPACITOR >				
C801	1-162-215-31	CERAMIC	47PF	5%	50V	
C802	1-162-215-31	CERAMIC	47PF	5%	50V	
C803	1-136-169-00	FILM	0.22uF	5%	50V	
C804	1-136-169-00	FILM	0.22uF	5%	50V	
C805	1-164-159-11	CERAMIC	0.1uF		50V	
C806	1-136-169-00	FILM	0.22uF	5%	50V	
		< CONNECTOR >				
CN806	1-564-510-11	PLUG (MICRO CONNECTOR) 6P				
		< IC >				
IC801	8-759-077-32	IC SN75ALS181N				
		< JACK >				
J801	1-750-788-11	CONNECTOR (XLR TYPE) 3P (DIGITAL IN/OUT AES/EBU OUT)				
		< RESISTOR >				
R801	1-249-409-11	CARBON	220	5%	1/4W	
R802	1-249-409-11	CARBON	220	5%	1/4W	
R803	1-247-807-31	CARBON	100	5%	1/4W	
R804	1-247-807-31	CARBON	100	5%	1/4W	
R805	1-249-427-11	CARBON	6.8K	5%	1/4W	
R806	1-249-393-11	CARBON	10	5%	1/4W	
R807	1-249-393-11	CARBON	10	5%	1/4W	
		< TRANSFORMER >				
T801	1-437-194-21	TRANSFORMER, PULSE				
T802	1-437-194-21	TRANSFORMER, PULSE				
**********						

Ref. No.	Part No.	Description				Remark
*	1-664-494-11	DIG OUT BOARD **********				
		< CAPACITOR >				
C807	1-136-169-00	FILM	0.22uF	5%	50V	
C808	1-162-215-31	CERAMIC	47PF	5%	50V	
C809	1-162-215-31	CERAMIC	47PF	5%	50V	
C810	1-162-215-31	CERAMIC	47PF	5%	50V	
		< JACK >				
J802	1-750-787-11	CONNECTOR (XLR TYPE) 3P (DIGITAL IN/OUT AES/EBU IN)				
**********						
*	A-2007-710-A	DISPLAY BOARD, COMPLETE **********				
*	3-362-478-01	HOLDER (T), LED				
*	4-932-810-11	CUSHION (FL)				
*	4-947-170-01	HOLDER				
		< CAPACITOR >				
C701	1-126-177-11	ELECT	100uF	20%	10V	
C702	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C703	1-164-159-11	CERAMIC	0.1uF		50V	
C704	1-164-159-11	CERAMIC	0.1uF		50V	
C705	1-164-159-11	CERAMIC	0.1uF		50V	
C706	1-164-159-11	CERAMIC	0.1uF		50V	
C707	1-164-159-11	CERAMIC	0.1uF		50V	
C708	1-164-159-11	CERAMIC	0.1uF		50V	
C709	1-164-159-11	CERAMIC	0.1uF		50V	
C710	1-164-159-11	CERAMIC	0.1uF		50V	
C711	1-164-159-11	CERAMIC	0.1uF		50V	
C712	1-164-159-11	CERAMIC	0.1uF		50V	
C713	1-164-159-11	CERAMIC	0.1uF		50V	
C714	1-164-159-11	CERAMIC	0.1uF		50V	
C715	1-164-159-11	CERAMIC	0.1uF		50V	
C716	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
CN701	1-568-860-11	SOCKET, CONNECTOR 17P				
* CN702	1-564-500-11	PIN, CONNECTOR 7P				
		< DIODE >				
D701	8-719-303-02	LED SEL2510C-D (PLAY ▶)				
D702	8-719-301-52	LED SEL2810A-C (PAUSE ❚❚)				
D703	8-719-301-39	LED SEL2210S (REC ●)				
D704	8-719-301-52	LED SEL2810A-C (MENU)				
		< FLUORESCEN INDICATOR YUBE >				
FL701	1-517-382-11	INDICATOR TUBE, FLUORESCENT				

Ref. No.	Part No.	Description			Remark
		< IC >			
IC701	8-752-882-29	IC CXP82320-077Q			
IC702	8-759-995-09	IC MSM6338RS			
IC703	8-759-916-54	IC SN74HC174AN			
IC704	8-759-916-12	IC SN74HC00AN			
IC705	8-759-373-49	IC NJL54H400			
		< TRANSISTOR >			
Q701	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q702	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q704	8-729-900-80	TRANSISTOR DTC114ES			
Q705	8-729-900-80	TRANSISTOR DTC114ES			
Q706	8-729-900-80	TRANSISTOR DTC114ES			
Q707	8-729-900-80	TRANSISTOR DTC114ES			
		< RESISTOR >			
R701	1-249-427-11	CARBON	6.8K	5%	1/4W
R702	1-249-427-11	CARBON	6.8K	5%	1/4W
R703	1-249-427-11	CARBON	6.8K	5%	1/4W
R704	1-249-427-11	CARBON	6.8K	5%	1/4W
R705	1-249-427-11	CARBON	6.8K	5%	1/4W
R706	1-249-427-11	CARBON	6.8K	5%	1/4W
R707	1-249-427-11	CARBON	6.8K	5%	1/4W
R708	1-249-427-11	CARBON	6.8K	5%	1/4W
R709	1-249-415-11	CARBON	680	5%	1/4W
R710	1-249-417-11	CARBON	1K	5%	1/4W
R711	1-249-419-11	CARBON	1.5K	5%	1/4W
R712	1-247-843-11	CARBON	3.3K	5%	1/4W
R713	1-249-425-11	CARBON	4.7K	5%	1/4W
R714	1-249-429-11	CARBON	10K	5%	1/4W
R715	1-249-435-11	CARBON	33K	5%	1/4W
R716	1-249-415-11	CARBON	680	5%	1/4W
R717	1-249-417-11	CARBON	1K	5%	1/4W
R718	1-249-419-11	CARBON	1.5K	5%	1/4W
R719	1-247-843-11	CARBON	3.3K	5%	1/4W
R720	1-249-425-11	CARBON	4.7K	5%	1/4W
R721	1-249-429-11	CARBON	10K	5%	1/4W
R722	1-249-435-11	CARBON	33K	5%	1/4W
R723	1-249-415-11	CARBON	680	5%	1/4W
R724	1-249-417-11	CARBON	1K	5%	1/4W
R725	1-249-419-11	CARBON	1.5K	5%	1/4W
R726	1-247-843-11	CARBON	3.3K	5%	1/4W
R727	1-249-425-11	CARBON	4.7K	5%	1/4W
R730	1-249-415-11	CARBON	680	5%	1/4W
R731	1-249-417-11	CARBON	1K	5%	1/4W
R732	1-249-419-11	CARBON	1.5K	5%	1/4W
R733	1-247-843-11	CARBON	3.3K	5%	1/4W
R734	1-249-425-11	CARBON	4.7K	5%	1/4W
R737	1-249-427-11	CARBON	6.8K	5%	1/4W
R740	1-249-427-11	CARBON	6.8K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R743	1-249-427-11	CARBON	6.8K	5%	1/4W
R746	1-249-415-11	CARBON	680	5%	1/4W
R747	1-249-417-11	CARBON	1K	5%	1/4W
R748	1-249-425-11	CARBON	4.7K	5%	1/4W
R751	1-249-421-11	CARBON	2.2K	5%	1/4W
R752	1-249-421-11	CARBON	2.2K	5%	1/4W
R753	1-249-421-11	CARBON	2.2K	5%	1/4W
R754	1-249-421-11	CARBON	2.2K	5%	1/4W
R755	1-249-421-11	CARBON	2.2K	5%	1/4W
R756	1-249-421-11	CARBON	2.2K	5%	1/4W
R763	1-249-407-11	CARBON	150	5%	1/4W
R764	1-249-407-11	CARBON	150	5%	1/4W
R765	1-249-407-11	CARBON	150	5%	1/4W
R766	1-249-407-11	CARBON	150	5%	1/4W
R769	1-249-429-11	CARBON	10K	5%	1/4W
R770	1-249-429-11	CARBON	10K	5%	1/4W
R771	1-249-429-11	CARBON	10K	5%	1/4W
R772	1-249-429-11	CARBON	10K	5%	1/4W
R773	1-249-417-11	CARBON	1K	5%	1/4W
R774	1-249-429-11	CARBON	10K	5%	1/4W
R775	1-249-429-11	CARBON	10K	5%	1/4W
R776	1-249-435-11	CARBON	33K	5%	1/4W
R777	1-249-417-11	CARBON	1K	5%	1/4W
R778	1-249-435-11	CARBON	33K	5%	1/4W
R951	1-249-441-11	CARBON	100K	5%	1/4W
R952	1-249-441-11	CARBON	100K	5%	1/4W
R953	1-249-441-11	CARBON	100K	5%	1/4W
R954	1-249-441-11	CARBON	100K	5%	1/4W
R955	1-249-441-11	CARBON	100K	5%	1/4W
R956	1-249-441-11	CARBON	100K	5%	1/4W
R957	1-249-441-11	CARBON	100K	5%	1/4W
R958	1-249-441-11	CARBON	100K	5%	1/4W
R959	1-249-441-11	CARBON	100K	5%	1/4W
R960	1-249-441-11	CARBON	100K	5%	1/4W
R961	1-249-441-11	CARBON	100K	5%	1/4W
R962	1-249-441-11	CARBON	100K	5%	1/4W
R963	1-249-441-11	CARBON	100K	5%	1/4W
R964	1-249-441-11	CARBON	100K	5%	1/4W
R965	1-249-441-11	CARBON	100K	5%	1/4W
R966	1-249-441-11	CARBON	100K	5%	1/4W
R967	1-249-441-11	CARBON	100K	5%	1/4W
R968	1-249-441-11	CARBON	100K	5%	1/4W
R969	1-249-441-11	CARBON	100K	5%	1/4W
R970	1-249-441-11	CARBON	100K	5%	1/4W
R971	1-249-441-11	CARBON	100K	5%	1/4W
R972	1-249-441-11	CARBON	100K	5%	1/4W
R973	1-249-441-11	CARBON	100K	5%	1/4W
R974	1-249-441-11	CARBON	100K	5%	1/4W
R975	1-249-441-11	CARBON	100K	5%	1/4W
R976	1-249-441-11	CARBON	100K	5%	1/4W
R977	1-249-441-11	CARBON	100K	5%	1/4W

DISPLAY | DRUM DRIVE

Ref. No.	Part No.	Description				Remark
R978	1-249-441-11	CARBON	100K	5%	1/4W	
R979	1-249-441-11	CARBON	100K	5%	1/4W	
R980	1-249-441-11	CARBON	100K	5%	1/4W	
R981	1-249-441-11	CARBON	100K	5%	1/4W	
R982	1-249-441-11	CARBON	100K	5%	1/4W	
R983	1-249-441-11	CARBON	100K	5%	1/4W	
R984	1-249-441-11	CARBON	100K	5%	1/4W	
R985	1-249-441-11	CARBON	100K	5%	1/4W	
R986	1-249-441-11	CARBON	100K	5%	1/4W	
R987	1-249-441-11	CARBON	100K	5%	1/4W	
R988	1-249-441-11	CARBON	100K	5%	1/4W	
R989	1-249-441-11	CARBON	100K	5%	1/4W	
R990	1-249-441-11	CARBON	100K	5%	1/4W	
		< SWITCH >				
S701	1-554-937-11	SWITCH, KEY BOARD (REW ◀◀)				
S702	1-554-937-11	SWITCH, KEY BOARD (FF ▶▶)				
S703	1-554-937-11	SWITCH, KEY BOARD (REC ●)				
S704	1-554-937-11	SWITCH, KEY BOARD (PAUSE ❚❚)				
S705	1-554-937-11	SWITCH, KEY BOARD (REC MUTE ↻)				
S706	1-554-937-11	SWITCH, KEY BOARD (MENU)				
S707	1-554-937-11	SWITCH, KEY BOARD (SET)				
S708	1-554-937-11	SWITCH, KEY BOARD (OPEN/CLOSE ⏏)				
S709	1-554-937-11	SWITCH, KEY BOARD (STOP ■)				
S710	1-554-937-11	SWITCH, KEY BOARD (PLAY ▶)				
S711	1-554-937-11	SWITCH, KEY BOARD (AMS PREVIOUS ⏮)				
S712	1-554-937-11	SWITCH, KEY BOARD (AMS NEXT ▶▶⏭)				
S713	1-554-937-11	SWITCH, KEY BOARD (MARK)				
S714	1-554-937-11	SWITCH, KEY BOARD (SKIP PLAY)				
S715	1-554-937-11	SWITCH, KEY BOARD (LOCATE)				
S716	1-554-937-11	SWITCH, KEY BOARD (REPEAT)				
S717	1-554-937-11	SWITCH, KEY BOARD (START-ID/ERASE)				
S718	1-554-937-11	SWITCH, KEY BOARD (START-ID/WRITE)				
S719	1-554-937-11	SWITCH, KEY BOARD (START-ID/REHEARSAL)				
S720	1-554-937-11	SWITCH, KEY BOARD (START-ID/AUTO)				
S721	1-554-937-11	SWITCH, KEY BOARD (FADER)				
S722	1-554-937-11	SWITCH, KEY BOARD (INPUT MONITOR)				
S723	1-554-937-11	SWITCH, KEY BOARD (SKIP-ID/ERASE)				
S724	1-554-937-11	SWITCH, KEY BOARD (SKIP-ID/WRITE)				
S725	1-554-937-11	SWITCH, KEY BOARD (SKIP-ID/REHEARSAL)				
S726	1-554-937-11	SWITCH, KEY BOARD (RENUMBER)				
S727	1-554-937-11	SWITCH, KEY BOARD (MODE)				
S728	1-554-937-11	SWITCH, KEY BOARD (COUNTER RESET)				
S729	1-554-937-11	SWITCH, KEY BOARD (MAGIN RESET)				
		< VIBRATOR >				
X701	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)				

****

Ref. No.	Part No.	Description				Remark
*	A-2007-321-A	DRUM DRIVE BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C1	1-124-257-00	ELECT	2.2uF	20%	50V	
C3	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C5	1-126-923-11	ELECT	220uF	20%	10V	
C6	1-126-923-11	ELECT	220uF	20%	10V	
C7	1-126-923-11	ELECT	220uF	20%	10V	
C8	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C9	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C10	1-162-286-31	CERAMIC	220PF	10%	50V	
C11	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C12	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C13	1-126-096-11	ELECT	10uF	20%	35V	
C14	1-126-923-11	ELECT	220uF	20%	10V	
C15	1-162-306-11	CERAMIC	0.01uF	20%	16V	
		< CONNECTOR >				
* CN1	1-568-845-11	SOCKET, CONNECTOR 31P				
CN2	1-691-461-11	PIN, CONNECTOR (PC BOARD) 5P				
CN3	1-564-505-11	PLUG, CONNECTOR 2P				
CN3	1-764-325-11	PIN, CONNECTOR (PCB)(V TYPE)2P				
* CN4	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P				
* CN5	1-564-515-11	PLUG, CONNECTOR 12P				
* CN6	1-691-465-11	PIN, CONNECTOR (PC BOARD) 9P				
* CN7	1-568-369-11	HOUSING,CONNECTOR(PC BOARD) 8P				
* CN8	1-506-503-11	PIN, CONNECTOR 9P				
* CN9	1-564-337-00	PIN, CONNECTOR 3P				
* CN11	1-564-337-61	PIN, CONNECTOR 3P				
* CN12	1-564-336-00	PIN, CONNECTOR 2P				
		< DIODE >				
D2	8-719-200-82	DIODE 11ES2				
D3	8-719-200-82	DIODE 11ES2				
		< IC >				
IC1	8-759-135-80	IC uPC358C				
IC2	8-759-633-65	IC M54641L				
IC3	8-752-060-73	IC CX20115A-T4				
		< GROUND TERMINAL >				
LUG1	1-537-770-21	TERMINAL BOARD, GROUND				
		< TRANSISTOR >				
Q1	8-729-620-05	TRANSISTOR 2SC2603-EF				
Q2	8-729-801-84	TRANSISTOR 2SB1013-4				
Q3	8-729-801-93	TRANSISTOR 2SD1387				

DRUM DRIVE | **HP** | **INPUT SW** | **LOAD SW** | **LOADING MOTOR**

Ref. No.	Part No.	Description				Remark
		< RESISTOR >				
R1	1-247-843-11	CARBON	3.3K	5%	1/4W	
R2	1-249-429-11	CARBON	10K	5%	1/4W	
R3	1-249-407-11	CARBON	150	5%	1/4W	
R4	1-247-843-11	CARBON	3.3K	5%	1/4W	
R5	1-249-421-11	CARBON	2.2K	5%	1/4W	
R6	1-249-435-11	CARBON	33K	5%	1/4W	
R7	1-247-807-31	CARBON	100	5%	1/4W	
R8	1-249-417-11	CARBON	1K	5%	1/4W	
R9	1-249-429-11	CARBON	10K	5%	1/4W	
R11	1-249-429-11	CARBON	10K	5%	1/4W	
R12	1-249-417-11	CARBON	1K	5%	1/4W	
R14	1-249-441-11	CARBON	100K	5%	1/4W	
R15	1-249-441-11	CARBON	100K	5%	1/4W	
R16	1-249-441-11	CARBON	100K	5%	1/4W	
R17	1-249-441-11	CARBON	100K	5%	1/4W	
R18	1-249-409-11	CARBON	220	5%	1/4W	
R19	1-249-409-11	CARBON	220	5%	1/4W	
R20	1-249-401-11	CARBON	47	5%	1/4W	
R21	1-249-429-11	CARBON	10K	5%	1/4W	
R22	1-249-433-11	CARBON	22K	5%	1/4W	
R23	1-249-403-11	CARBON	68	5%	1/4W	
R24	1-249-403-11	CARBON	68	5%	1/4W	
R25	1-247-843-11	CARBON	3.3K	5%	1/4W	
R26	1-247-843-11	CARBON	3.3K	5%	1/4W	
R27	1-249-419-11	CARBON	1.5K	5%	1/4W	
**********						
*	1-664-486-11	HP BOARD				
		*********				
		< CAPACITOR >				
C122	1-102-114-00	CERAMIC	470PF	10%	50V	
C222	1-102-114-00	CERAMIC	470PF	10%	50V	
C374	1-126-024-11	ELECT	220uF	20%	25V	
C375	1-126-024-11	ELECT	220uF	20%	25V	
		< CONNECTOR >				
CN320	1-691-768-11	PLUG (MICRO CONNECTOR) 6P				
		< FUSIBLE >				
⚠FR301	1-212-857-00	FUSIBLE	10	5%	1/4W F	
⚠FR302	1-212-857-00	FUSIBLE	10	5%	1/4W F	
		< IC >				
IC321	8-759-981-96	IC RC4560D				
		< JACK >				
J304	1-565-327-11	JACK, LARGE TYPE 1P (PHONES)				

Ref. No.	Part No.	Description				Remark
		< COIL >				
L101	1-410-396-41	INDUCTOR	0.45uH			
L201	1-410-396-41	INDUCTOR	0.45uH			
		< RESISTOR >				
R132	1-249-435-11	CARBON	33K	5%	1/4W	
R133	1-249-433-11	CARBON	22K	5%	1/4W	
R134	1-249-425-11	CARBON	4.7K	5%	1/4W	
R135	1-247-807-31	CARBON	100	5%	1/4W	
R232	1-249-435-11	CARBON	33K	5%	1/4W	
R233	1-249-433-11	CARBON	22K	5%	1/4W	
R234	1-249-425-11	CARBON	4.7K	5%	1/4W	
R235	1-247-807-31	CARBON	100	5%	1/4W	
		< VARIABLE RESISTOR >				
RV302	1-225-374-11	RES, VAR, CARBON 20K/20K (PHONE LEVEL)				
**********						
*	1-664-484-11	INPUT SW BOARD				
		**********				
		< CONNECTOR >				
* CN704	1-564-339-00	PIN, CONNECTOR 5P				
		< RESISTOR >				
R738	1-249-431-11	CARBON	15K	5%	1/4W	
R741	1-249-431-11	CARBON	15K	5%	1/4W	
R742	1-249-435-11	CARBON	33K	5%	1/4W	
R744	1-249-431-11	CARBON	15K	5%	1/4W	
R749	1-249-431-11	CARBON	15K	5%	1/4W	
		< SWITCH >				
S732	1-572-269-11	SWITCH, SLIDE (INPUT)				
S733	1-572-269-11	SWITCH, SLIDE (ANALOG IN)				
S734	1-572-268-11	SWITCH, SLIDE (REC MODE)				
S735	1-572-269-11	SWITCH, SLIDE (SBM)				
**********						
*	1-655-285-11	LOAD SW BOARD				
		**********				
		< SWITCH >				
S902	1-571-489-11	SWITCH, SLIDE (UNLOAD)				
S903	1-571-489-11	SWITCH, SLIDE (LOAD)				
**********						
*	1-655-286-11	LOADING MOTOR BOARD				
		**********				
		< CAPACITOR >				
C999	1-136-165-00	FILM	0.1uF	5%	50V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

LOADING MOTOR | MAIN

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
* CN919	1-564-496-11	PIN, CONNECTOR 3P	
* CN920	1-564-497-11	PIN, CONNECTOR 4P	
**********			
*	A-2007-712-A	MAIN BOARD, COMPLETE (Including AUDIO BOARD and DIGITAL BOARD)	
		**********	
	1-533-293-11	FUSE HOLDER	
	1-550-414-21	HOLDER, BATTERY	
	2-259-121-01	SCREW, TR	
*	3-309-144-21	HEAT SINK	
	7-685-871-01	SCREW +BVTT 3X6 (S)	
		< CAPACITOR >	
C102	1-126-023-11	ELECT 100uF 20% 25V	
C104	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C105	1-126-023-11	ELECT 100uF 20% 25V	
C106	1-136-165-00	FILM 0.1uF 5% 50V	
C107	1-136-165-00	FILM 0.1uF 5% 50V	
C108	1-136-165-00	FILM 0.1uF 5% 50V	
C109	1-136-165-00	FILM 0.1uF 5% 50V	
C110	1-106-343-00	MYLAR 1000PF 5% 200V	
C111	1-130-467-00	MYLAR 470PF 5% 50V	
C112	1-130-467-00	MYLAR 470PF 5% 50V	
C113	1-110-339-11	MYLAR 220PF 5% 50V	
C114	1-110-339-11	MYLAR 220PF 5% 50V	
C115	1-106-359-00	MYLAR 4700PF 5% 200V	
C116	1-106-343-00	MYLAR 1000PF 5% 200V	
C117	1-126-023-11	ELECT 100uF 20% 25V	
C118	1-136-165-00	FILM 0.1uF 5% 50V	
C119	1-136-165-00	FILM 0.1uF 5% 50V	
C123	1-126-023-11	ELECT 100uF 20% 25V	
C140	1-126-024-11	ELECT 220uF 20% 25V	
C202	1-126-023-11	ELECT 100uF 20% 25V	
C204	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C205	1-126-023-11	ELECT 100uF 20% 25V	
C206	1-136-165-00	FILM 0.1uF 5% 50V	
C207	1-136-165-00	FILM 0.1uF 5% 50V	
C208	1-136-165-00	FILM 0.1uF 5% 50V	
C209	1-136-165-00	FILM 0.1uF 5% 50V	
C210	1-106-343-00	MYLAR 1000PF 5% 200V	
C211	1-130-467-00	MYLAR 470PF 5% 50V	
C212	1-130-467-00	MYLAR 470PF 5% 50V	
C213	1-110-339-11	MYLAR 220PF 5% 50V	
C214	1-110-339-11	MYLAR 220PF 5% 50V	
C215	1-106-359-00	MYLAR 4700PF 5% 200V	
C216	1-106-343-00	MYLAR 1000PF 5% 200V	
C217	1-126-023-11	ELECT 100uF 20% 25V	
C218	1-136-165-00	FILM 0.1uF 5% 50V	
C219	1-136-165-00	FILM 0.1uF 5% 50V	

Ref. No.	Part No.	Description	Remark
C223	1-126-023-11	ELECT 100uF 20% 25V	
C240	1-126-024-11	ELECT 220uF 20% 25V	
C301	1-124-997-11	ELECT 470uF 20% 10V	
C302	1-124-997-11	ELECT 470uF 20% 10V	
C303	1-136-165-00	FILM 0.1uF 5% 50V	
C304	1-136-165-00	FILM 0.1uF 5% 50V	
C305	1-136-165-00	FILM 0.1uF 5% 50V	
C306	1-126-023-11	ELECT 100uF 20% 25V	
C307	1-136-165-00	FILM 0.1uF 5% 50V	
C308	1-126-023-11	ELECT 100uF 20% 25V	
C309	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C310	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C311	1-164-159-11	CERAMIC 0.1uF 50V	
C312	1-124-997-11	ELECT 470uF 20% 10V	
C313	1-136-165-00	FILM 0.1uF 5% 50V	
C314	1-164-159-11	CERAMIC 0.1uF 50V	
C315	1-162-195-31	CERAMIC 4.7PF 10% 50V	
C316	1-162-195-31	CERAMIC 4.7PF 10% 50V	
C317	1-162-196-31	CERAMIC 5.6PF 10% 50V	
C318	1-162-196-31	CERAMIC 5.6PF 10% 50V	
C319	1-164-159-11	CERAMIC 0.1uF 50V	
C320	1-124-564-11	ELECT 4700uF 20% 25V	
C321	1-124-564-11	ELECT 4700uF 20% 25V	
C322	1-136-165-00	FILM 0.1uF 5% 50V	
C323	1-136-165-00	FILM 0.1uF 5% 50V	
C324	1-126-027-11	ELECT 1000uF 20% 25V	
C325	1-126-027-11	ELECT 1000uF 20% 25V	
C326	1-124-997-11	ELECT 470uF 20% 10V	
C327	1-136-165-00	FILM 0.1uF 5% 50V	
C328	1-126-023-11	ELECT 100uF 20% 25V	
C329	1-136-165-00	FILM 0.1uF 5% 50V	
C330	1-126-023-11	ELECT 100uF 20% 25V	
C331	1-136-165-00	FILM 0.1uF 5% 50V	
C332	1-136-165-00	FILM 0.1uF 5% 50V	
C333	1-126-013-11	ELECT 1000uF 20% 16V	
C334	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C335	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C337	1-164-159-11	CERAMIC 0.1uF 50V	
C338	1-126-023-11	ELECT 100uF 20% 25V	
C339	1-164-159-11	CERAMIC 0.1uF 50V	
C340	1-136-169-00	FILM 0.22uF 5% 50V	
C341	1-136-153-00	FILM 0.01uF 5% 50V	
C342	1-162-219-31	CERAMIC 68PF 5% 50V	
C343	1-162-199-31	CERAMIC 10PF 5% 50V	
C344	1-162-199-31	CERAMIC 10PF 5% 50V	
C345	1-126-048-81	ELECT 10uF 20% 50V	
C346	1-164-159-11	CERAMIC 0.1uF 50V	
C347	1-162-215-31	CERAMIC 47PF 5% 50V	
C348	1-136-161-00	FILM 0.047uF 5% 50V	
C350	1-126-026-11	ELECT 470uF 20% 25V	
C351	1-126-026-11	ELECT 470uF 20% 25V	

Ref. No.	Part No.	Description				Remark
C352	1-164-159-11	CERAMIC	0.1uF		50V	
C353	1-164-159-11	CERAMIC	0.1uF		50V	
C356	1-164-159-11	CERAMIC	0.1uF		50V	
C359	1-126-025-11	ELECT	330uF	20%	16V	
C360	1-126-025-11	ELECT	330uF	20%	16V	
C364	1-164-159-11	CERAMIC	0.1uF		50V	
C369	1-164-159-11	CERAMIC	0.1uF		50V	
C370	1-164-159-11	CERAMIC	0.1uF		50V	
C371	1-164-159-11	CERAMIC	0.1uF		50V	
C372	1-164-159-11	CERAMIC	0.1uF		50V	
C501	1-126-017-11	ELECT	6800uF	20%	16V	
C502	1-126-946-11	ELECT	6800uF	20%	25V	
C503	1-126-927-11	ELECT	2200uF	20%	10V	
C504	1-126-926-11	ELECT	1000uF	20%	10V	
C505	1-126-925-11	ELECT	470uF	20%	10V	
C506	1-126-925-11	ELECT	470uF	20%	10V	
C507	1-164-159-11	CERAMIC	0.1uF		50V	
C508	1-128-553-11	ELECT	220uF	20%	63V	
C509	1-126-968-11	ELECT	100uF	20%	50V	
C510	1-164-159-11	CERAMIC	0.1uF		50V	
C511	1-164-159-11	CERAMIC	0.1uF		50V	
C512	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C513	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C514	1-162-286-31	CERAMIC	220PF	10%	50V	
C515	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C516	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C517	1-162-286-31	CERAMIC	220PF	10%	50V	
C518	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C519	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C520	1-162-290-31	CERAMIC	470PF	10%	50V	
C521	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C522	1-126-965-11	ELECT	22uF	20%	50V	
C523	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C524	1-162-290-31	CERAMIC	470PF	10%	50V	
C525	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C526	1-126-965-11	ELECT	22uF	20%	50V	
C527	1-164-159-11	CERAMIC	0.1uF		50V	
C528	1-164-159-11	CERAMIC	0.1uF		50V	
C529	1-126-925-11	ELECT	470uF	20%	10V	
C530	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C531	1-126-961-11	ELECT	2.2uF	20%	50V	
C532	1-164-159-11	CERAMIC	0.1uF		50V	
C533	1-162-203-31	CERAMIC	15PF	5%	50V	
C534	1-162-203-31	CERAMIC	15PF	5%	50V	
C535	1-164-159-11	CERAMIC	0.1uF		50V	
C536	1-136-165-00	FILM	0.1uF	5%	50V	
C537	1-126-925-11	ELECT	470uF	20%	10V	
C538	1-164-159-11	CERAMIC	0.1uF		50V	
C539	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C540	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C541	1-162-284-31	CERAMIC	150PF	10%	50V	

Ref. No.	Part No.	Description				Remark
C542	1-164-159-11	CERAMIC	0.1uF		50V	
C543	1-126-925-11	ELECT	470uF	20%	10V	
C544	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C545	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C546	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C547	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C548	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C549	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C550	1-164-159-11	CERAMIC	0.1uF		50V	
C552	1-162-207-31	CERAMIC	22PF	5%	50V	
C553	1-162-207-31	CERAMIC	22PF	5%	50V	
C554	1-162-203-31	CERAMIC	15PF	5%	50V	
C555	1-162-203-31	CERAMIC	15PF	5%	50V	
C556	1-164-159-11	CERAMIC	0.1uF		50V	
C557	1-164-159-11	CERAMIC	0.1uF		50V	
C558	1-164-159-11	CERAMIC	0.1uF		50V	
C559	1-136-153-00	FILM	0.01uF	5%	50V	
C560	1-164-159-11	CERAMIC	0.1uF		50V	
C561	1-162-211-31	CERAMIC	33PF	5%	50V	
C562	1-136-153-00	FILM	0.01uF	5%	50V	
C563	1-126-965-11	ELECT	22uF	20%	50V	
C564	1-136-153-00	FILM	0.01uF	5%	50V	
C565	1-162-282-31	CERAMIC	100PF	10%	50V	
C566	1-164-159-11	CERAMIC	0.1uF		50V	
C568	1-164-159-11	CERAMIC	0.1uF		50V	
C573	1-162-179-11	CERAMIC	0.1uF		50V	
C575	1-164-159-11	CERAMIC	0.1uF		50V	
C576	1-164-159-11	CERAMIC	0.1uF		50V	
C578	1-164-159-11	CERAMIC	0.1uF		50V	
C579	1-164-159-11	CERAMIC	0.1uF		50V	
C580	1-162-203-31	CERAMIC	15PF	5%	50V	
C581	1-162-205-31	CERAMIC	18PF	5%	50V	
C582	1-164-159-11	CERAMIC	0.1uF		50V	
C583	1-162-600-11	CERAMIC	0.0047uF	20%	16V	
C584	1-162-600-11	CERAMIC	0.0047uF	20%	16V	
C585	1-162-294-31	CERAMIC	0.001uF	10%	50V	
		< CONNECTOR >				
CN302	1-691-766-31	PLUG (MICRO CONNECTOR) 4P				
CN303	1-691-766-11	PLUG (MICRO CONNECTOR) 4P				
CN304	1-691-768-11	PLUG (MICRO CONNECTOR) 6P				
CN305	1-691-765-11	PLUG (MICRO CONNECTOR) 3P				
CN307	1-691-765-11	PLUG (MICRO CONNECTOR) 3P				
CN308	1-691-765-21	PLUG (MICRO CONNECTOR) 3P				
CN501	1-691-767-11	PLUG (MICRO CONNECTOR) 5P				
CN502	1-691-766-11	PLUG (MICRO CONNECTOR) 4P				
* CN504	1-568-845-11	SOCKET, CONNECTOR 31P				
* CN505	1-568-836-11	SOCKET, CONNECTOR 17P				
CN506	1-770-164-11	PIN, CONNECTOR (PC BOARD) 15P				
CN507	1-691-461-11	PIN, CONNECTOR (PC BOARD) 5P				
* CN508	1-564-339-00	PIN, CONNECTOR 5P				

Ver 1.1

MAIN

Ref. No.	Part No.	Description	Remark
CN509	1-691-765-31	PLUG (MICRO CONNECTOR) 3P	
CN510	1-691-765-41	PLUG (MICRO CONNECTOR) 3P	
CN511	1-691-765-21	PLUG (MICRO CONNECTOR) 3P	
CN512	1-691-768-31	PLUG (MICRO CONNECTOR) 6P	
* CN517	1-691-007-11	CONNECTOR, PC BOARD (PLUG) 4P	
CN518	1-764-187-11	PIN, CONNECTOR 8P	
CN519	1-764-187-11	PIN, CONNECTOR 8P	
		< DIODE >	
D101	8-719-987-63	DIODE 1N4148M	
D102	8-719-987-63	DIODE 1N4148M	
D103	8-719-987-63	DIODE 1N4148M	
D104	8-719-987-63	DIODE 1N4148M	
D201	8-719-987-63	DIODE 1N4148M	
D202	8-719-987-63	DIODE 1N4148M	
D203	8-719-987-63	DIODE 1N4148M	
D204	8-719-987-63	DIODE 1N4148M	
D301	8-719-230-02	DIODE 30DF2	
D302	8-719-230-02	DIODE 30DF2	
D303	8-719-230-02	DIODE 30DF2	
D304	8-719-230-02	DIODE 30DF2	
D305	8-719-987-63	DIODE 1N4148M	
D306	8-719-987-63	DIODE 1N4148M	
D307	8-719-987-63	DIODE 1N4148M	
D308	8-719-976-30	DIODE KV1560N	
D313	8-719-987-63	DIODE 1N4148M	
D314	8-719-987-63	DIODE 1N4148M	
D317	8-719-987-63	DIODE 1N4148M	
D501	8-719-312-47	DIODE RBA-406B	
D502	8-719-312-47	DIODE RBA-406B	
D503	8-719-200-77	DIODE 10E2N	
D504	8-719-015-13	DIODE UZP-9.1BC-TP	
D505	8-719-200-77	DIODE 10E2N	
D506	8-719-200-77	DIODE 10E2N	
D507	8-719-985-57	DIODE HZS4BLL-TA	
D508	8-719-987-63	DIODE 1N4148M	
D509	8-719-987-63	DIODE 1N4148M	
D510	8-719-200-77	DIODE 10E2N	
D511	8-719-911-06	DIODE 1SS106	
D512	8-719-911-06	DIODE 1SS106	
D513	8-719-045-72	DIODE KV1550NT	
		< FUSIBLE >	
⚠FR304	1-219-139-11	FUSIBLE 0.68 10% 1/4W F	
⚠FR305	1-219-139-11	FUSIBLE 0.68 10% 1/4W F	
⚠FR501	1-219-136-11	FUSIBLE 0.22 10% 1/4W F	
⚠FR502	1-212-873-11	FUSIBLE 47 5% 1/4W F	
		< IC >	
IC101	8-759-900-72	IC NE5532P	
IC102	8-759-900-72	IC NE5532P	
IC201	8-759-900-72	IC NE5532P	
IC202	8-759-900-72	IC NE5532P	
IC301	8-759-231-58	IC TA7812S	
IC302	8-759-245-86	IC TA7912S	
IC303	8-759-602-83	IC M5238P	
IC304	8-759-602-83	IC M5238P	
IC305	8-759-602-67	IC M5278L05	
IC306	8-759-189-33	IC M5279L05-TP	
IC307	8-759-330-53	IC CXD8493M-E1	
IC308	8-759-196-21	IC CXD8482Q	
IC309	8-759-925-90	IC SN74HC74ANS	
IC310	8-759-269-92	IC SN74HCU04ANS-E20	
IC311	8-759-269-92	IC SN74HCU04ANS-E20	
IC312	8-759-926-95	IC SN74HC4020NS	
IC313	8-759-270-50	IC SN74HC368ANS-E20	
IC314	8-759-370-62	IC CXD8505BQ	
IC315	8-759-250-81	IC TC5081AP	
IC316	8-759-094-53	IC TA7805S	
IC317	8-759-094-53	IC TA7805S	
IC318	8-759-602-67	IC M5278L05	
IC319	8-759-231-58	IC TA7812S	
IC320	8-759-245-86	IC TA7912S	
IC325	8-759-242-72	IC TC7W00F	
IC501	8-752-885-46	IC CXP87540-037Q	
IC502	8-752-878-83	IC CXP87532-039Q	
IC503	8-752-355-55	IC CXD2605Q	
IC504	8-752-364-91	IC CXK58257BM-10LL-T6	
IC505	8-759-281-29	IC YM3412B-F	
IC508	8-759-927-46	IC SN74HC00ANS	
IC509	8-759-701-01	IC NJM2904M	
IC510	8-759-927-46	IC SN74HC00ANS	
IC511	8-759-926-17	IC SN74HC153ANS	
IC512	8-759-007-80	IC MC74HC175F	
IC513	8-759-269-92	IC SN74HCU04ANS-E20	
IC514	8-759-927-46	IC SN74HC00ANS	
IC515	8-759-927-46	IC SN74HC00ANS	
IC516	8-759-634-43	IC M51953BFP	
IC517	8-759-426-52	IC AT24C01A-10SC-TP-B	
IC518	8-759-333-82	IC MSM6782-01MS-K-R1	
IC519	8-759-925-90	IC SN74HC74ANS	
IC520	8-759-701-01	IC NJM2904M	
IC521	8-759-701-01	IC NJM2904M	
IC522	8-759-701-01	IC NJM2904M	
IC523	8-759-633-65	IC M54641L	
		< JACK >	
J501	1-770-162-11	JACK, PIN 2P (DIGITAL IN/OUT)	
		< COIL >	
L301	1-410-509-11	INDUCTOR 10uH	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécif

Ref. No.	Part No.	Description		Remark
L302	1-410-509-11	INDUCTOR	10uH	
L303	1-410-509-11	INDUCTOR	10uH	
L304	1-410-509-11	INDUCTOR	10uH	
L305	1-410-509-11	INDUCTOR	10uH	
L306	1-410-509-11	INDUCTOR	10uH	
L307	1-426-850-11	COIL (RF)	0.4uH	
L308	1-410-397-21	FERRITE BEAD	INDUCTOR	
L309	1-410-397-21	FERRITE BEAD	INDUCTOR	
L310	1-410-509-11	INDUCTOR	10uH	
L311	1-410-509-11	INDUCTOR	10uH	
L312	1-410-509-11	INDUCTOR	10uH	
L501	1-410-509-11	INDUCTOR	10uH	
L502	1-410-509-11	INDUCTOR	10uH	
L503	1-410-509-11	INDUCTOR	10uH	
L504	1-410-498-11	INDUCTOR	1.2uH	
L506	1-410-509-11	INDUCTOR	10uH	
		< GROUND TERMINAL >		
LUG301	1-537-770-21	TERMINAL BOARD, GROUND		
LUG302	1-537-770-21	TERMINAL BOARD, GROUND		
LUG304	1-537-770-21	TERMINAL BOARD, GROUND		
LUG503	1-537-770-21	TERMINAL BOARD, GROUND		
		< TRANSISTOR >		
Q102	8-729-107-85	TRANSISTOR	2SC3623A-K	
Q202	8-729-107-85	TRANSISTOR	2SC3623A-K	
Q303	8-729-900-80	TRANSISTOR	DTC114ES	
Q304	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q305	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q306	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q307	8-729-200-56	TRANSISTOR	2SK241-GR	
Q308	8-729-200-56	TRANSISTOR	2SK241-GR	
Q309	8-729-422-57	TRANSISTOR	UN4111	
Q310	8-729-900-80	TRANSISTOR	DTC114ES	
Q311	8-729-900-80	TRANSISTOR	DTC114ES	
Q312	8-729-900-80	TRANSISTOR	DTC114ES	
Q501	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q502	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q503	8-729-140-97	TRANSISTOR	2SB734-34	
Q504	8-729-927-11	TRANSISTOR	2SA1585SQR	
Q505	8-729-927-12	TRANSISTOR	2SC4115SQR	
Q506	8-729-927-11	TRANSISTOR	2SA1585SQR	
Q507	8-729-927-12	TRANSISTOR	2SC4115SQR	
Q508	8-729-900-80	TRANSISTOR	DTC114ES	
Q509	8-729-900-80	TRANSISTOR	DTC114ES	
Q510	8-729-900-80	TRANSISTOR	DTC114ES	
Q511	8-729-900-80	TRANSISTOR	DTC114ES	
Q512	8-729-141-83	TRANSISTOR	2SB1094-LK	
Q513	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q514	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q515	8-729-141-83	TRANSISTOR	2SB1094-LK	
Q516	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q517	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q518	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q519	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q520	8-729-900-80	TRANSISTOR	DTC114ES	
Q521	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q522	8-729-900-80	TRANSISTOR	DTC114ES	
Q523	8-729-900-80	TRANSISTOR	DTC114ES	
Q524	8-729-900-80	TRANSISTOR	DTC114ES	
		< RESISTOR >		
R102	1-249-441-11	CARBON	100K 5% 1/4W	
R106	1-249-429-11	CARBON	10K 5% 1/4W	
R107	1-249-433-11	CARBON	22K 5% 1/4W	
R108	1-249-425-11	CARBON	4.7K 5% 1/4W	
R109	1-249-425-11	CARBON	4.7K 5% 1/4W	
R110	1-249-401-11	CARBON	47 5% 1/4W	
R111	1-249-401-11	CARBON	47 5% 1/4W	
R112	1-259-444-11	CARBON	4.7K 1% 1/6W	
R113	1-259-444-11	CARBON	4.7K 1% 1/6W	
R114	1-259-444-11	CARBON	4.7K 1% 1/6W	
R115	1-259-444-11	CARBON	4.7K 1% 1/6W	
R116	1-259-432-11	CARBON	1.5K 1% 1/6W	
R117	1-259-432-11	CARBON	1.5K 1% 1/6W	
R118	1-259-444-11	CARBON	4.7K 1% 1/6W	
R119	1-259-444-11	CARBON	4.7K 1% 1/6W	
R120	1-259-436-11	CARBON	2.2K 1% 1/6W	
R121	1-259-436-11	CARBON	2.2K 1% 1/6W	
R122	1-259-436-11	CARBON	2.2K 1% 1/6W	
R123	1-259-436-11	CARBON	2.2K 1% 1/6W	
R124	1-249-419-11	CARBON	1.5K 5% 1/4W	
R125	1-249-419-11	CARBON	1.5K 5% 1/4W	
R126	1-249-441-11	CARBON	100K 5% 1/4W	
R127	1-249-407-11	CARBON	150 5% 1/4W	
R128	1-249-407-11	CARBON	150 5% 1/4W	
R129	1-249-429-11	CARBON	10K 5% 1/4W	
R202	1-249-441-11	CARBON	100K 5% 1/4W	
R206	1-249-429-11	CARBON	10K 5% 1/4W	
R207	1-249-433-11	CARBON	22K 5% 1/4W	
R208	1-249-425-11	CARBON	4.7K 5% 1/4W	
R209	1-249-425-11	CARBON	4.7K 5% 1/4W	
R210	1-249-401-11	CARBON	47 5% 1/4W	
R211	1-249-401-11	CARBON	47 5% 1/4W	
R212	1-259-444-11	CARBON	4.7K 1% 1/6W	
R213	1-259-444-11	CARBON	4.7K 1% 1/6W	
R214	1-259-444-11	CARBON	4.7K 1% 1/6W	
R215	1-259-444-11	CARBON	4.7K 1% 1/6W	
R216	1-259-432-11	CARBON	1.5K 1% 1/6W	
R217	1-259-432-11	CARBON	1.5K 1% 1/6W	
R218	1-259-444-11	CARBON	4.7K 1% 1/6W	
R219	1-259-444-11	CARBON	4.7K 1% 1/6W	

MAIN

Ref. No.	Part No.	Description			Remark
R220	1-259-436-11	CARBON	2.2K	1%	1/6W
R221	1-259-436-11	CARBON	2.2K	1%	1/6W
R222	1-259-436-11	CARBON	2.2K	1%	1/6W
R223	1-259-436-11	CARBON	2.2K	1%	1/6W
R224	1-249-419-11	CARBON	1.5K	5%	1/4W
R225	1-249-419-11	CARBON	1.5K	5%	1/4W
R226	1-249-441-11	CARBON	100K	5%	1/4W
R227	1-249-407-11	CARBON	150	5%	1/4W
R228	1-249-407-11	CARBON	150	5%	1/4W
R229	1-249-429-11	CARBON	10K	5%	1/4W
R303	1-249-429-11	CARBON	10K	5%	1/4W
R304	1-249-413-11	CARBON	470	5%	1/4W
R305	1-249-413-11	CARBON	470	5%	1/4W
R306	1-249-417-11	CARBON	1K	5%	1/4W
R307	1-249-417-11	CARBON	1K	5%	1/4W
R308	1-249-417-11	CARBON	1K	5%	1/4W
R309	1-249-413-11	CARBON	470	5%	1/4W
R310	1-249-441-11	CARBON	100K	5%	1/4W
R311	1-249-417-11	CARBON	1K	5%	1/4W
R312	1-247-903-00	CARBON	1M	5%	1/4W
R313	1-249-407-11	CARBON	150	5%	1/4W
R314	1-249-441-11	CARBON	100K	5%	1/4W
R315	1-249-417-11	CARBON	1K	5%	1/4W
R316	1-247-903-00	CARBON	1M	5%	1/4W
R317	1-249-407-11	CARBON	150	5%	1/4W
R320	1-249-411-11	CARBON	330	5%	1/4W
R321	1-249-417-11	CARBON	1K	5%	1/4W
R322	1-249-441-11	CARBON	100K	5%	1/4W
R323	1-249-409-11	CARBON	220	5%	1/4W
R324	1-249-409-11	CARBON	220	5%	1/4W
R325	1-249-413-11	CARBON	470	5%	1/4W
R326	1-249-413-11	CARBON	470	5%	1/4W
R327	1-249-413-11	CARBON	470	5%	1/4W
R328	1-249-425-11	CARBON	4.7K	5%	1/4W
R329	1-249-417-11	CARBON	1K	5%	1/4W
R330	1-249-401-11	CARBON	47	5%	1/4W
R331	1-249-417-11	CARBON	1K	5%	1/4W
R332	1-249-429-11	CARBON	10K	5%	1/4W
R333	1-249-421-11	CARBON	2.2K	5%	1/4W
R334	1-249-429-11	CARBON	10K	5%	1/4W
R335	1-249-429-11	CARBON	10K	5%	1/4W
R336	1-249-428-11	CARBON	8.2K	5%	1/4W
R337	1-249-441-11	CARBON	100K	5%	1/4W
R338	1-249-417-11	CARBON	1K	5%	1/4W
R339	1-249-417-11	CARBON	1K	5%	1/4W
R340	1-249-417-11	CARBON	1K	5%	1/4W
R341	1-247-895-00	CARBON	470K	5%	1/4W
R342	1-249-437-11	CARBON	47K	5%	1/4W
R343	1-249-441-11	CARBON	100K	5%	1/4W
R345	1-249-429-11	CARBON	10K	5%	1/4W
R348	1-249-409-11	CARBON	220	5%	1/4W

Ref. No.	Part No.	Description			Remark
R349	1-249-409-11	CARBON	220	5%	1/4W
R350	1-249-411-11	CARBON	330	5%	1/4W
R351	1-249-413-11	CARBON	470	5%	1/4W
R352	1-249-417-11	CARBON	1K	5%	1/4W
R353	1-249-417-11	CARBON	1K	5%	1/4W
R354	1-249-417-11	CARBON	1K	5%	1/4W
R501	1-249-425-11	CARBON	4.7K	5%	1/4W
R502	1-249-429-11	CARBON	10K	5%	1/4W
R503	1-249-421-11	CARBON	2.2K	5%	1/4W
R504	1-249-433-11	CARBON	22K	5%	1/4W
R505	1-247-843-11	CARBON	3.3K	5%	1/4W
R506	1-249-413-11	CARBON	470	5%	1/4W
R507	1-249-429-11	CARBON	10K	5%	1/4W
R508	1-249-409-11	CARBON	220	5%	1/4W
R509	1-249-409-11	CARBON	220	5%	1/4W
R510	1-249-409-11	CARBON	220	5%	1/4W
R511	1-249-409-11	CARBON	220	5%	1/4W
R512	1-249-441-11	CARBON	100K	5%	1/4W
R513	1-249-441-11	CARBON	100K	5%	1/4W
R514	1-249-441-11	CARBON	100K	5%	1/4W
R515	1-249-441-11	CARBON	100K	5%	1/4W
R516	1-249-441-11	CARBON	100K	5%	1/4W
R517	1-249-441-11	CARBON	100K	5%	1/4W
R518	1-249-441-11	CARBON	100K	5%	1/4W
R519	1-249-441-11	CARBON	100K	5%	1/4W
R520	1-249-441-11	CARBON	100K	5%	1/4W
R522	1-249-441-11	CARBON	100K	5%	1/4W
R523	1-249-441-11	CARBON	100K	5%	1/4W
R524	1-249-429-11	CARBON	10K	5%	1/4W
R525	1-249-417-11	CARBON	1K	5%	1/4W
R526	1-249-429-11	CARBON	10K	5%	1/4W
R527	1-247-807-31	CARBON	100	5%	1/4W
R528	1-249-417-11	CARBON	1K	5%	1/4W
R529	1-249-409-11	CARBON	220	5%	1/4W
R530	1-249-441-11	CARBON	100K	5%	1/4W
R531	1-249-441-11	CARBON	100K	5%	1/4W
R532	1-249-429-11	CARBON	10K	5%	1/4W
R533	1-249-417-11	CARBON	1K	5%	1/4W
R534	1-249-429-11	CARBON	10K	5%	1/4W
R535	1-247-807-31	CARBON	100	5%	1/4W
R536	1-249-417-11	CARBON	1K	5%	1/4W
R537	1-249-409-11	CARBON	220	5%	1/4W
R539	1-249-409-11	CARBON	220	5%	1/4W
R540	1-249-409-11	CARBON	220	5%	1/4W
R541	1-249-441-11	CARBON	100K	5%	1/4W
R544	1-249-441-11	CARBON	100K	5%	1/4W
R545	1-249-429-11	CARBON	10K	5%	1/4W
R546	1-249-429-11	CARBON	10K	5%	1/4W
R547	1-249-429-11	CARBON	10K	5%	1/4W
R548	1-249-441-11	CARBON	100K	5%	1/4W
R549	1-249-441-11	CARBON	100K	5%	1/4W

Ref. No.	Part No.	Description				Remark
R550	1-249-441-11	CARBON	100K	5%	1/4W	
R551	1-249-441-11	CARBON	100K	5%	1/4W	
R552	1-249-429-11	CARBON	10K	5%	1/4W	
R553	1-249-425-11	CARBON	4.7K	5%	1/4W	
R554	1-249-425-11	CARBON	4.7K	5%	1/4W	
R555	1-249-429-11	CARBON	10K	5%	1/4W	
R556	1-249-429-11	CARBON	10K	5%	1/4W	
R557	1-249-441-11	CARBON	100K	5%	1/4W	
R558	1-249-441-11	CARBON	100K	5%	1/4W	
R559	1-249-441-11	CARBON	100K	5%	1/4W	
R560	1-249-441-11	CARBON	100K	5%	1/4W	
R561	1-249-441-11	CARBON	100K	5%	1/4W	
R562	1-249-441-11	CARBON	100K	5%	1/4W	
R563	1-249-429-11	CARBON	10K	5%	1/4W	
R564	1-249-429-11	CARBON	10K	5%	1/4W	
R565	1-249-429-11	CARBON	10K	5%	1/4W	
R566	1-249-417-11	CARBON	1K	5%	1/4W	
R567	1-249-429-11	CARBON	10K	5%	1/4W	
R568	1-249-429-11	CARBON	10K	5%	1/4W	
R569	1-249-429-11	CARBON	10K	5%	1/4W	
R570	1-249-429-11	CARBON	10K	5%	1/4W	
R571	1-247-807-31	CARBON	100	5%	1/4W	
R572	1-249-413-11	CARBON	470	5%	1/4W	
R573	1-247-807-31	CARBON	100	5%	1/4W	
R574	1-249-441-11	CARBON	100K	5%	1/4W	
R575	1-249-429-11	CARBON	10K	5%	1/4W	
R576	1-249-429-11	CARBON	10K	5%	1/4W	
R577	1-249-429-11	CARBON	10K	5%	1/4W	
R578	1-249-429-11	CARBON	10K	5%	1/4W	
R581	1-249-441-11	CARBON	100K	5%	1/4W	
R583	1-249-425-11	CARBON	4.7K	5%	1/4W	
R584	1-249-441-11	CARBON	100K	5%	1/4W	
R585	1-249-441-11	CARBON	100K	5%	1/4W	
R586	1-249-441-11	CARBON	100K	5%	1/4W	
R587	1-249-441-11	CARBON	100K	5%	1/4W	
R588	1-249-441-11	CARBON	100K	5%	1/4W	
R589	1-249-441-11	CARBON	100K	5%	1/4W	
R590	1-249-441-11	CARBON	100K	5%	1/4W	
R591	1-249-441-11	CARBON	100K	5%	1/4W	
R593	1-249-417-11	CARBON	1K	5%	1/4W	
R594	1-249-421-11	CARBON	2.2K	5%	1/4W	
R595	1-249-417-11	CARBON	1K	5%	1/4W	
R596	1-249-429-11	CARBON	10K	5%	1/4W	
R597	1-249-441-11	CARBON	100K	5%	1/4W	
R598	1-249-441-11	CARBON	100K	5%	1/4W	
R599	1-249-429-11	CARBON	10K	5%	1/4W	
R600	1-249-425-11	CARBON	4.7K	5%	1/4W	
R601	1-249-425-11	CARBON	4.7K	5%	1/4W	
R602	1-249-425-11	CARBON	4.7K	5%	1/4W	
R603	1-249-413-11	CARBON	470	5%	1/4W	
R604	1-249-433-11	CARBON	22K	5%	1/4W	
R605	1-249-433-11	CARBON	22K	5%	1/4W	
R606	1-249-409-11	CARBON	220	5%	1/4W	
R607	1-249-427-11	CARBON	6.8K	5%	1/4W	
R608	1-249-417-11	CARBON	1K	5%	1/4W	
R610	1-249-441-11	CARBON	100K	5%	1/4W	
R611	1-249-411-11	CARBON	330	5%	1/4W	
R612	1-249-437-11	CARBON	47K	5%	1/4W	
R613	1-249-429-11	CARBON	10K	5%	1/4W	
R614	1-249-429-11	CARBON	10K	5%	1/4W	
R615	1-247-807-31	CARBON	100	5%	1/4W	
R616	1-249-429-11	CARBON	10K	5%	1/4W	
R617	1-249-435-11	CARBON	33K	5%	1/4W	
R618	1-249-421-11	CARBON	2.2K	5%	1/4W	
R619	1-249-421-11	CARBON	2.2K	5%	1/4W	
R620	1-247-807-31	CARBON	100	5%	1/4W	
R621	1-247-804-11	CARBON	75	5%	1/4W	
R622	1-249-429-11	CARBON	10K	5%	1/4W	
R623	1-249-429-11	CARBON	10K	5%	1/4W	
R625	1-249-429-11	CARBON	10K	5%	1/4W	
R626	1-249-429-11	CARBON	10K	5%	1/4W	
R627	1-249-429-11	CARBON	10K	5%	1/4W	
R628	1-249-429-11	CARBON	10K	5%	1/4W	
R629	1-249-429-11	CARBON	10K	5%	1/4W	
R630	1-249-429-11	CARBON	10K	5%	1/4W	
R634	1-247-843-11	CARBON	3.3K	5%	1/4W	
R635	1-247-843-11	CARBON	3.3K	5%	1/4W	
R636	1-247-843-11	CARBON	3.3K	5%	1/4W	
R637	1-249-429-11	CARBON	10K	5%	1/4W	
R638	1-249-429-11	CARBON	10K	5%	1/4W	
R639	1-247-804-11	CARBON	75	5%	1/4W	
R645	1-249-413-11	CARBON	470	5%	1/4W	
		< VARIABLE RESISTOR >				
RV501	1-241-763-11	RES, ADJ, CARBON 4.7K (T-END)				
RV502	1-241-763-11	RES, ADJ, CARBON 4.7K (S-END)				
		< RELAY >				
RY301	1-515-726-11	RELAY				
		< SWITCH >				
S501	1-572-622-11	SWITCH, SLIDE (DIGITAL IN/OUT)				
		< TRANSFORMER >				
T501	1-409-594-11	COIL (WITH CORE)				
		< VIBRATOR >				
X301	1-567-814-11	VIBRATOR, CRYSTAL (24.576MHz)				
X302	1-567-815-11	VIBRATOR, CRYSTAL (22.5792MHz)				
X501	1-567-814-11	VIBRATOR, CRYSTAL (24.576MHz)				
X502	1-567-816-11	VIBRATOR, CRYSTAL (18.816MHz)				
X503	1-567-098-61	VIBRATOR, CRYSTAL (32.768MHz)				

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MOTOR **PRIMARY** **REC VOL** **REC EN** **REG** **REM SW** **REMOTE**

Ref. No.	Part No.	Description				Remark
*	1-655-913-11	MOTOR BOARD				
		**********				
		< CAPACITOR >				
C1	1-161-772-11	CERAMIC	0.1uF	10%	25V	
		< CONNECTOR >				
* CN1	1-564-498-11	PIN, CONNECTOR 5P				
* CN2	1-564-337-00	PIN, CONNECTOR 3P				
**********						
*	1-664-488-11	PRIMARY BOARD				
		**********				
		< CAPACITOR >				
⚠C901	1-113-916-11	CERAMIC	0.01uF	20%	250V	
⚠C902	1-113-916-11	CERAMIC	0.01uF	20%	250V	
⚠C903	1-113-920-11	CERAMIC	0.0022uF	20%	250V	
⚠C904	1-113-920-11	CERAMIC	0.0022uF	20%	250V	
⚠C905	1-113-920-11	CERAMIC	0.0022uF	20%	250V	
		< CONNECTOR >				
CN901	1-564-321-00	PIN, CONNECTOR 2P				
		< AC INLET >				
⚠IL901	1-251-234-11	INLET, AC (~AC IN)				
		< COIL >				
⚠L901	1-424-485-11	FILTER, LINE				
		< GROUND TERMINAL >				
* LUG901	3-346-266-12	PLATE, GROUND				
		< SWITCH >				
⚠S901	1-554-920-51	SWITCH, PUSH (AC POWER)(1 KEY) (POWER)				
**********						
*	1-664-485-11	REC VOL BOARD				
		**********				
		< CONNECTOR >				
* CN306	1-564-519-11	PLUG, CONNECTOR 4P				
		< RESISTOR >				
R201	1-249-421-11	CARBON	2.2K	5%	1/4W	
		< VARIABLE RESISTOR >				
RV103	1-225-400-11	RES, VAR, CARBON 10K (REC LEVEL CH-1 (L))				
RV203	1-225-400-11	RES, VAR, CARBON 10K (REC LEVEL CH-2 (R))				
**********						

Ref. No.	Part No.	Description				Remark
*	1-654-393-11	REC EN BOARD				
		**********				
		< SWITCH >				
S901	1-572-459-11	SWITCH, PUSH (CASSETTE IN)				
**********						
*	1-664-490-11	REG BOARD				
		**********				
		< CAPACITOR >				
C907	1-136-165-00	FILM	0.1uF	5%	50V	
C908	1-136-165-00	FILM	0.1uF	5%	50V	
C909	1-136-177-00	FILM	1uF	5%	50V	
C910	1-136-177-00	FILM	1uF	5%	50V	
C911	1-162-294-31	CERAMIC	0.001uF	10%	50V	
		< IC >				
IC901	8-759-450-47	IC BA05T				
IC902	8-759-390-48	IC uPC2406AHF				
		< TRANSISTOR >				
Q901	8-729-209-15	TRANSISTOR 2SD2012				
**********						
*	1-664-483-11	REM SW BOARD				
		**********				
		< CONNECTOR >				
* CN703	1-564-337-00	PIN, CONNECTOR 3P				
		< RESISTOR >				
R728	1-249-429-11	CARBON	10K	5%	1/4W	
R729	1-249-435-11	CARBON	33K	5%	1/4W	
R735	1-249-429-11	CARBON	10K	5%	1/4W	
		< SWITCH >				
S730	1-572-268-11	SWITCH, SLIDE (REMOTE)				
S731	1-572-269-11	SWITCH, SLIDE (KEY PROTECT)				
**********						
*	A-2007-645-A	REMOTE BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C811	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C812	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C813	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C814	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C815	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C816	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C817	1-164-159-11	CERAMIC	0.1uF		50V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description				Remark
C818	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C819	1-162-294-31	CERAMIC	0.001uF	10%	50V	
		< CONNECTOR >				
CN801	1-691-768-11	PLUG (MICRO CONNECTOR) 6P				
		< CONPOSITION CIRCUIT BLOCK >				
CP801	1-233-930-11	CIRCUIT BLOCK, COMPOSITION 10Kx6				
		< IC >				
IC802	8-759-916-20	IC SN74HC14AN				
		< JACK >				
J803	1-770-355-11	CONNECTOR (DIN) 8P (REMOTE 1)				
J804	1-507-743-00	JACK, STEREO MINIATURE (REMOTE 2)				
		< TRANSISTOR >				
Q801	8-729-900-80	TRANSISTOR DTC114ES				
Q802	8-729-900-80	TRANSISTOR DTC114ES				
Q803	8-729-900-80	TRANSISTOR DTC114ES				
Q804	8-729-900-80	TRANSISTOR DTC114ES				
Q805	8-729-900-80	TRANSISTOR DTC114ES				
Q806	8-729-900-80	TRANSISTOR DTC114ES				
Q807	8-729-422-57	TRANSISTOR UN4111				
Q808	8-729-422-57	TRANSISTOR UN4111				
		< RESISTOR >				
R811	1-249-417-11	CARBON	1K	5%	1/4W	
R812	1-249-417-11	CARBON	1K	5%	1/4W	
R813	1-249-417-11	CARBON	1K	5%	1/4W	
R814	1-249-417-11	CARBON	1K	5%	1/4W	
R815	1-249-417-11	CARBON	1K	5%	1/4W	
R816	1-249-417-11	CARBON	1K	5%	1/4W	
R817	1-249-419-11	CARBON	1.5K	5%	1/4W	
R818	1-247-843-11	CARBON	3.3K	5%	1/4W	
R819	1-249-425-11	CARBON	4.7K	5%	1/4W	
R820	1-249-429-11	CARBON	10K	5%	1/4W	
R821	1-249-435-11	CARBON	33K	5%	1/4W	
R822	1-249-409-11	CARBON	220	5%	1/4W	
R823	1-249-409-11	CARBON	220	5%	1/4W	
**********						
*	A-2006-561-A	RF AMP BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C1	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C2	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C3	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C4	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C5	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	

Ref. No.	Part No.	Description				Remark
C6	1-162-637-11	CERAMIC CHIP	0.47uF		16V	
C7	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V	
C8	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C9	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C10	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C11	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C12	1-162-638-11	CERAMIC CHIP	1uF		16V	
C13	1-126-206-11	ELECT CHIP	100uF	20%	6.3V	
C14	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C15	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C16	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V	
C17	1-162-637-11	CERAMIC CHIP	0.47uF		16V	
C18	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C19	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C20	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C21	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C22	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C23	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C24	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C25	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V	
C26	1-163-007-11	CERAMIC CHIP	680PF	10%	50V	
C27	1-164-337-11	CERAMIC CHIP	2.2uF		16V	
C28	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
		< CONNECTOR >				
CN1	1-569-349-11	CONNECTOR, F.P.C 6P				
* CN2	1-566-194-11	PIN, CONNECTOR (PC BOARD) 15P				
		< IC >				
IC1	8-752-039-01	IC CXA1364R				
		< COIL >				
L1	1-408-781-00	INDUCTOR CHIP 22uH				
L2	1-408-781-00	INDUCTOR CHIP 22uH				
L3	1-408-777-00	INDUCTOR CHIP 10uH				
L4	1-408-789-21	INDUCTOR CHIP 100uH				
		< TRANSISTOR >				
Q1	8-729-903-82	TRANSISTOR FMW2				
Q2	8-729-905-35	TRANSISTOR 2SC4081T106R				
Q3	8-729-903-82	TRANSISTOR FMW2				
Q4	8-729-903-82	TRANSISTOR FMW2				
Q5	8-729-903-82	TRANSISTOR FMW2				
		< RESISTOR >				
R1	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R3	1-216-076-00	METAL CHIP	13K	5%	1/10W	
R4	1-216-076-00	METAL CHIP	13K	5%	1/10W	
R5	1-216-096-00	METAL GLAZE	91K	5%	1/10W	
R6	1-216-096-00	METAL GLAZE	91K	5%	1/10W	

RF AMP **S END** **SHUTTLE** **SP**

Ref. No.	Part No.	Description			Remark
R7	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R8	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R9	1-216-077-00	METAL CHIP	15K	5%	1/10W
R10	1-216-077-00	METAL CHIP	15K	5%	1/10W
R11	1-216-077-00	METAL CHIP	15K	5%	1/10W
R12	1-216-079-00	METAL CHIP	18K	5%	1/10W
R13	1-216-075-00	METAL CHIP	12K	5%	1/10W
R14	1-216-079-00	METAL CHIP	18K	5%	1/10W
R15	1-216-077-00	METAL CHIP	15K	5%	1/10W
R16	1-216-077-00	METAL CHIP	15K	5%	1/10W
R17	1-216-077-00	METAL CHIP	15K	5%	1/10W
R18	1-216-044-00	METAL CHIP	620	5%	1/10W
R19	1-216-083-00	METAL CHIP	27K	5%	1/10W
R20	1-216-078-00	METAL GLAZE	16K	5%	1/10W
R21	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R22	1-216-096-00	METAL GLAZE	91K	5%	1/10W
R23	1-216-078-00	METAL GLAZE	16K	5%	1/10W
R24	1-216-083-00	METAL CHIP	27K	5%	1/10W
		< VARIABLE RESISTOR >			
RV1	1-238-181-11	RES, ADJ, CERMET 4.7K			
RV2	1-238-181-11	RES, ADJ, CERMET 4.7K			
RV3	1-238-238-11	RES, ADJ, CERMET 22K			
RV4	1-238-238-11	RES, ADJ, CERMET 22K			
**********					
*	1-654-392-11	S END BOARD			
		**********			
		< TRANSISTOR >			
Q950	1-808-957-11	TRANSISTOR PHOTO SENSOR			
**********					
*	1-664-487-11	SHUTTLE BOARD			
		**********			
		< RESISTOR >			
R757	1-249-413-11	CARBON	470	5%	1/4W
R758	1-249-413-11	CARBON	470	5%	1/4W
R759	1-249-413-11	CARBON	470	5%	1/4W
R760	1-249-413-11	CARBON	470	5%	1/4W
R761	1-249-413-11	CARBON	470	5%	1/4W
R762	1-249-413-11	CARBON	470	5%	1/4W
		< SWITCH >			
S736	1-692-722-11	SWITCH, ROTARY (ENCODER) (SHUTTLE/DATA)			
**********					

Ref. No.	Part No.	Description			Remark
*	1-664-497-11	SP BOARD			
		*********			
		< CAPACITOR >			
C820	1-126-925-11	ELECT	470uF	20%	10V
C821	1-164-159-11	CERAMIC	0.1uF		50V
C822	1-164-159-11	CERAMIC	0.1uF		50V
C823	1-126-925-11	ELECT	470uF	20%	10V
C824	1-162-294-31	CERAMIC	0.001uF	10%	50V
C825	1-162-294-31	CERAMIC	0.001uF	10%	50V
C826	1-162-294-31	CERAMIC	0.001uF	10%	50V
C827	1-164-159-11	CERAMIC	0.1uF		50V
C828	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN802	1-691-465-11	PIN, CONNECTOR (PC BOARD) 9P			
CN803	1-573-105-11	CONNECTOR, PC BOARD 4P			
* CN804	1-695-808-11	CONNECTOR, PC BOARD 8P			
* CN805	1-695-808-11	CONNECTOR, PC BOARD 8P			
		< IC >			
IC803	8-752-355-55	IC CXD2605Q			
IC804	8-752-364-91	IC CXK58257BM-10LL-T6			
IC805	8-759-916-12	IC SN74HC00AN			
		< COIL >			
L801	1-410-509-11	INDUCTOR 10uH			
L802	1-410-509-11	INDUCTOR 10uH			
		< TRANSISTOR >			
Q810	8-729-620-05	TRANSISTOR 2SC2603-EF			
		< RESISTOR >			
R101	1-249-421-11	CARBON	2.2K	5%	1/4W
R825	1-249-425-11	CARBON	4.7K	5%	1/4W
R826	1-249-425-11	CARBON	4.7K	5%	1/4W
R827	1-249-413-11	CARBON	470	5%	1/4W
R828	1-249-433-11	CARBON	22K	5%	1/4W
R829	1-249-433-11	CARBON	22K	5%	1/4W
R830	1-249-441-11	CARBON	100K	5%	1/4W
R831	1-249-409-11	CARBON	220	5%	1/4W
R832	1-247-807-31	CARBON	100	5%	1/4W
R833	1-249-413-11	CARBON	470	5%	1/4W
R834	1-249-413-11	CARBON	470	5%	1/4W
R835	1-249-409-11	CARBON	220	5%	1/4W
**********					

SW **T END** **THICK** **UNBAL**

Ref. No.	Part No.	Description				Remark
*	1-655-916-11	SW BOARD				
		*********				
		< SWITCH >				
S1	1-571-958-11	SWITCH, PUSH (1 KEY) (CASSETTE TABLE OUT)				
S2	1-571-958-11	SWITCH, PUSH (1 KEY) (CASSETTE TABLE IN)				
**********						
*	1-654-391-11	T END BOARD				
		**********				
		< TRANSISTOR >				
Q951	1-808-957-11	TRANSISTOR PHOTO SENSOR				
**********						
*	1-654-394-12	THICK BOARD				
		**********				
		< SWITCH >				
S904	1-572-458-11	SWITCH, PUSH (THICK)				
**********						
*	A-2007-646-A	UNBAL BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C148	1-126-023-11	ELECT	100uF	20%	25V	
C149	1-107-597-11	CERAMIC	22PF	10%	500V	
C248	1-126-023-11	ELECT	100uF	20%	25V	
C249	1-107-597-11	CERAMIC	22PF	10%	500V	
C380	1-126-023-11	ELECT	100uF	20%	25V	
C381	1-164-159-11	CERAMIC	0.1uF		50V	
C382	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
CN314	1-691-766-21	PLUG (MICRO CONNECTOR) 4P				
CN315	1-691-766-31	PLUG (MICRO CONNECTOR) 4P				
CN316	1-691-766-11	PLUG (MICRO CONNECTOR) 4P				
CN317	1-691-766-41	PLUG (MICRO CONNECTOR) 4P				
CN319	1-564-505-11	PLUG, CONNECTOR 2P				
		< DIODE >				
D316	8-719-987-63	DIODE 1N4148M				
		< IC >				
IC326	8-759-981-96	IC RC4560D				
		< JACK >				
J307	1-770-163-11	JACK, PIN 4P (ANALOG (UNBALANCE))				

Ref. No.	Part No.	Description				Remark
		< TRANSISTOR >				
Q316	8-729-900-80	TRANSISTOR DTC114ES				
		< RESISTOR >				
R174	1-247-887-00	CARBON	220K	5%	1/4W	
R175	1-249-431-11	CARBON	15K	5%	1/4W	
R176	1-249-437-11	CARBON	47K	5%	1/4W	
R177	1-249-437-11	CARBON	47K	5%	1/4W	
R178	1-249-437-11	CARBON	47K	5%	1/4W	
R179	1-247-807-31	CARBON	100	5%	1/4W	
R180	1-249-415-11	CARBON	680	5%	1/4W	
R274	1-247-887-00	CARBON	220K	5%	1/4W	
R275	1-249-431-11	CARBON	15K	5%	1/4W	
R276	1-249-437-11	CARBON	47K	5%	1/4W	
R277	1-249-437-11	CARBON	47K	5%	1/4W	
R278	1-249-437-11	CARBON	47K	5%	1/4W	
R279	1-247-807-31	CARBON	100	5%	1/4W	
R280	1-249-415-11	CARBON	680	5%	1/4W	
		< RELAY >				
RY305	1-515-726-11	RELAY				
**********						
		MISCELLANEOUS				
		**********				
58	1-769-541-11	WIRE (FLAT TYPE) (17 CORE)				
111	1-769-542-11	WIRE (FLAT TYPE) (31 CORE)				
M901	A-2003-660-A	MOTOR ASSY (LOADING)				
M902	8-835-306-01	MOTOR, DC U-17A (CAPSTAN)				
M903	8-835-205-01	MOTOR, DC U-2A (REEL) (including PM901)				
M904	8-848-549-11	DRUM ASSY DOU-15A				
M905	X-3370-655-1	MOTOR ASSY (CASSETTE COMPARTMENT)				
PM901	1-454-522-11	SOLENOID, PLUNGER				
⚠T901	1-431-064-11	TRANSFORMER, POWER (US, Canadian)				
⚠T901	1-431-065-11	TRANSFORMER, POWER (AEP, UK)				
**********						
		**********				
		HARDWARE LIST				
		**********				
#1	7-685-872-09	SCREW +BVTT 3X8 (S)				
#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S				
#4	7-685-881-09	SCREW +BVTT 4X8 (S)				
#5	7-682-660-09	SCREW +PS 4X6				
#6	7-685-660-29	SCREW +BVTP 4X10 TYPE2 SLIT				
#7	7-621-772-18	SCREW +B 2X4				
#8	7-682-550-09	SCREW +B 3X12				
#9	7-621-772-20	SCREW +B 2X5				
#10	7-621-773-86	SCREW +B 2.6X4				
#11	7-621-772-08	SCREW +B 2X3				

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description	Remark
#12	7-627-556-17	SCREW, PRECISION +P 2.6X3 TYPE1	
#13	7-621-775-08	SCREW +B 2.6X3	
#14	7-627-553-67	SCREW, PRECISION +P 2X5	
#15	7-685-862-09	SCREW +BVTT 2.6X6 (S)	
#16	7-621-772-30	SCREW +B 2X6	
#17	7-627-852-48	PRECISION SCREW +P 1.7X3.5 TYPE3	
#18	7-627-552-47	SCREW, PRECISION +P 1.7X4	
#19	7-685-102-19	SCREW +P 2X4 TYPE2 NON-SLIT	
#21	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#22	7-628-253-00	SCREW +PS 2X4	
#23	7-685-871-01	SCREW +BVTT 3X6 (S)	
#24	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
#25	7-627-553-27	SCREW, PRECISION +P 2X2.5	

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ACCESSORIES & PACKING MATERIALS
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	1-473-921-11	REMOTE COMMANDER (RM-D757)	
⚠	1-551-812-11	CORD, POWER (US, Canadian)	
⚠	1-590-910-11	CORD SET, POWER (AEP, UK)	
	2-297-913-00	WASHER (DIA.5), ORNAMENTAL	(for RACK MOUNT)
	3-859-278-12	MANUAL, INSTRUCTION	(ENGLISH, FRENCH, GERMAN)
	4-981-643-01	COVER, BATTERY (for RM-D757)	
	7-682-276-04	SCREW +RK 5X12 (for RACK MOUNT)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

Printing Method for Large Sized Documents Such As Circuit Diagrams

Printing the page that exceeds A4-size two pages (or letter size) is possible by specifying the print range. (Acrobat Reader Version 4.0 or later)

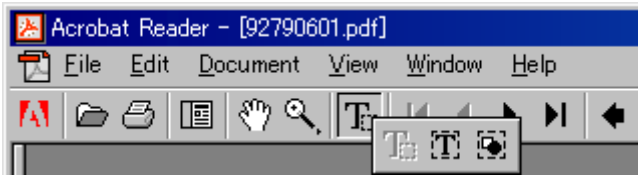
1. The enlarged print is made, if a smaller range than A4 size is specified and the A4 size is selected as a print paper.
2. Almost real sized print is made, if the range is specified, meeting the print paper size.
3. The reduced print is made, if a larger range than the print paper size is specified.

Printing by Specifying a Range

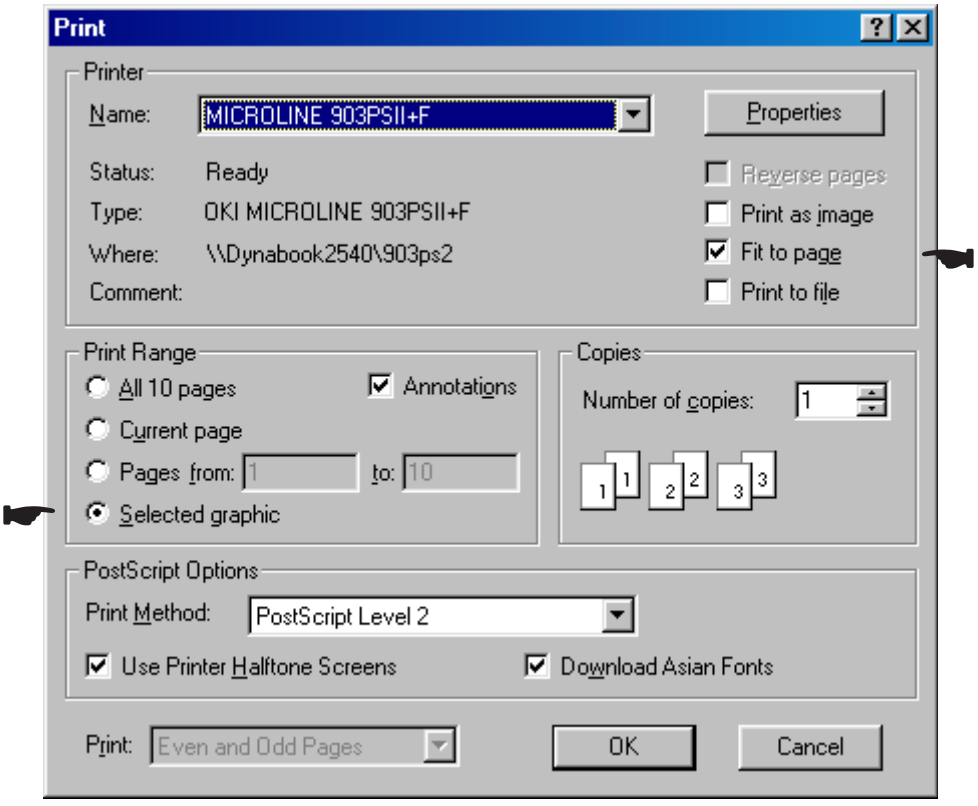
In printing out the drawings such as a schematic diagram and a printed wiring board larger than the printed paper size, they can be printed by specifying the range. (Acrobat Reader Version 4.0 or later)

1. Display the page to be printed.
2. From the File menu, select [Page Setup] and set the paper size.
3. From the Command bar, select [Graphic Select Tool].

   (Keep pressing , select)



4. Dragging the cursor, enclose the range on the page to be printed.
5. From the File menu, select [Print] and make sure that the [Selected Graphic] is already checked. Also, if [Fit to page] is checked, the selected range is enlarged or reduced (and rotated as necessary) meeting the paper size.



6. To cancel the printed range, click an arbitrary position on the screen.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	1997.04	New
1.1	2002.01	Correction of Part No. and Description of IC508, 510, 514, 515 on MAIN board (SPM-01057)